

IN THE UNITED STATES DISTRICT COURT
IN AND FOR THE DISTRICT OF DELAWARE

INTERNATIONAL BUSINESS MACHINES
CORPORATION, : CIVIL ACTION
:
Plaintiff, :
:
v :
:
GROUPON, INC., :
:
Defendant. : NO. 16-122-LPS

Wilmington, Delaware
Wednesday, July 18, 2018
Jury Trial - Volume C

BEFORE: HONORABLE LEONARD P. STARK, Chief Judge, and a jury

APPEARANCES:

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17 P R O C E E D I N G S

18 (REPORTER'S NOTE: The following jury trial was
19 held in open court, beginning at 8:33 a.m.)

20 THE COURT: Good morning.

21 (The attorneys respond, "Good morning, Your
22 Honor.")

23 THE COURT: Any issues from IBM this morning?

24 MR. OUSSAYEF: No issues from IBM.
25

1 THE COURT: And from Groupon?

2 MS. SHAMILOV: One issue Your Honor, Your Honor.
3 My colleague, Ms. Mehta.

4 THE COURT: Good morning.

5 MS. MEHTA: Good morning, your Honor. Sapna
6 Mehta on behalf of Groupon.

7 There is one issue with respect to a deposition
8 clip that IBM has included for the video for today. We
9 believe Your Honor already excluded it during yesterday's
10 hearing. It's the deposition of Jan Krems at 244 when he
11 was asked: What changes were made to Groupon's website,
12 mobile application after reading patents in suit?

13 And it was Groupon's understanding that the
14 Court excluded that testimony, but IBM insisted it be
15 included in the video for today.

16 THE COURT: So Krem's, page 244.

17 MS. MEHTA: Correct.

18 THE COURT: Do you have in front of you whatever
19 I said yesterday?

20 MS. MEHTA: I do. The trial transcript on page
21 537. In sustaining IBM's objection to Groupon's counter the
22 Court said, noted that Groupon actually agreed it wouldn't
23 play the counter testimony on page 242 since the Court was
24 not going to allow IBM to do some of what was disputed.

25 THE COURT: All right. I'm probably going to go

1 back and refresh my recollection. But you want to come back
2 and attempt to help me understand?

3 MR. OUSSAYEF: Good morning, Your Honor. Kareem
4 Oussayef for IBM.

5 Here is the testimony at issue Your Honor.

6 The question is: Were any changes made to
7 Groupon's website, touch, or mobile applications after
8 reading the patents in suit?

9 And the witness said: As far as I know.

10 So that testimony was not objected to by Groupon
11 even whether before, during the pretrial phrase or at the
12 trial phrase.

13 And, furthermore, even if Groupon were to make a
14 new objection now, based on Your Honor's ruling, this does
15 not fall under the Court's former ruling because it wasn't
16 objected to.

17 And, furthermore, it's not about whether the
18 witness read the patents in suit or not and what kind of
19 implications to draw from that. It's just a question
20 whether they changed their products after reading the
21 patents or not, which goes to design-arounds.

22 THE COURT: So in looking again at the letter,
23 is Krems only dealt with on page 3 of the letter?

24 MR. OUSSAYEF: Yes, Your Honor. That's my
25 understanding of what Krems dealt with.

1 THE COURT: And you are saying I won't see
2 anywhere here an objection even from Groupon to page 244 of
3 Krems?

4 MR. OUSSAYEF: Yes, that's correct, Your Honor.

5 THE COURT: Okay. Thank you.

6 Ms. Mehta? There you are.

7 Is that correct? I'm trying to find where your
8 objection is.

9 MS. MEHTA: Sure. On page 3 where it says
10 Groupon's position and response to IBM's objection, we noted
11 that the counter testimony was countered because of the
12 testimony that IBM had designated which we deemed
13 objectionable. So it says in the middle of the page that,
14 excuse me, objectionable testimony is permitted. Groupon is
15 allowed to counter with testimony that explains the context
16 of that witness's answer. And now that the context of the
17 witness's answer has been excluded, we understood the
18 Court's ruling to mean that IBM's initial designations were
19 excluded as well.

20 And I'll note with respect to this particular
21 question that it was a 30(b)(6) witness but he was not
22 designated on the topic of Groupon's awareness. So it is
23 highly prejudicial to include that quote without the
24 context, without him saying right beforehand he read the
25 patents and thought Groupon didn't infringe and only include

1 portion where it said: And then I didn't take any action.

2 THE COURT: Page 244 doesn't appear to be called
3 out anywhere as objected to at page 3 of the letter. Do you
4 agree with that?

5 MS. MEHTA: In our response to IBM's objection
6 to our counter, we believe we were noting that we were
7 countering conditionally. It was a conditional objection
8 that if our counter was played, we would allow IBM's
9 designation.

10 THE COURT: I understood that conceptually but
11 there is no reference to page 244 here that I see.
12 Moreover, when I look at Attachment C again, refresh my
13 recollection, there is no red text on the side indicating an
14 objection. Is that correct?

15 MS. MEHTA: That is correct. Again, because
16 Groupon believed that if your counter testimony was played,
17 we would be amenable IBM's designations being played as
18 well.

19 THE COURT: Well, if I view this as that there
20 was not a proper designation in light of all of the
21 confusion which only seems to be multiplying at this point,
22 would you want the opportunity to go back and revisit what
23 you want to play for Krems?

24 MS. MEHTA: Yes, we would ask the Court
25 reconsider and allow the context of his answer that was

1 struck yesterday. So the testimony starting at page 241
2 going through 242 that was counter.

3 THE COURT: That would be the blue text at
4 Exhibit C?

5 MS. MEHTA: Correct.

6 THE COURT: All right. What is IBM's position
7 on that?

8 MR. OUSSAYEF: Your Honor, the additional
9 deposition testimony that Groupon would now want to add back
10 in is not relevant to the issue of design-around. They want
11 to add in testimony about consulting with lawyers or about,
12 you know, opinions about the patents, that kind of thing.
13 It's not relevant or responsive to this.

14 And, furthermore, we've gone -- we are at a
15 point where we would like to play this deposition testimony
16 at a specific stage in the case and not have to go back and
17 reedit the deposition one more time.

18 THE COURT: All you have to do is add pages 241
19 and 242. That is all we're talking about. And I don't see
20 any references to consulting with lawyers at 241 and 242, do
21 you?

22 MR. OUSSAYEF: No, that's correct, Your Honor.

23 THE COURT: All right. Well, I'm going to allow
24 IBM to do 244, which is not objected to. And I'm going to
25 allow Groupon to add back 241 and 242 to give proper

1 context.

2 And, again, I'm sorry that we're going in
3 circles but it was extremely confusing, what you put in
4 front of me. I tried my best to be clear yesterday but
5 that's my ruling on that.

6 MR. OUSSAYEF: Thank you, Your Honor.

7 THE COURT: Understood? All right. Is there
8 anything else this morning?

9 MS. MEHTA: No.

10 THE COURT: Yes?

11 MR. DAY: One proposal from the parties that I
12 hope will be a welcome one, Your Honor, because it's going
13 to result in less paper for you than more.

14 The parties have discussed Rule 50 motions.
15 And our proposal is that rather than file anything on the
16 docket, that we would each just present orally to the Court
17 in brief fashion with just enough detail to identify what,
18 on what ground we were moving our Rule 50 motions. We
19 wanted to make sure that was okay with Your Honor.

20 THE COURT: As long as that is agreeable to both
21 sides, it's agreeable to me.

22 MR. DESMARAIS: Your Honor, as long as the
23 grounds are stated orally on the record, we see no need to
24 have a written filing.

25 THE COURT: Further, my feeling is if the time

1 for which those motions are appropriate doesn't coincide
2 with the break for the jury, you can simply say, for my
3 purposes at least, you know, we have a motion to make and
4 we'll take it up with Your Honor at a convenient time, and
5 then we can argue it such as you want during the break.

6 MR. DAY: Okay.

7 THE COURT: Do you have any concerns about that?

8 MR. DAY: Not at all.

9 THE COURT: Do you have any concerns about that
10 approach?

11 MR. DESMARAIS: No, Your Honor. But probably
12 both sides should state on the record they will not argue
13 that that procedure is a waiver of any appellate issues, and
14 IBM would consent that is not a waiver if Groupon would.

15 MR. DAY: No objection.

16 THE COURT: And from my perspective, you have
17 preserved the record at that point, but all the better that
18 no one is going to argue there was a waiver.

19 Is there anything else?

20 MR. DAY: No, that's all.

21 THE COURT: All right. We'll come back once the
22 jury is ready.

23 (Brief recess taken.)

24 * * *

25 (Proceedings reconvened after recess.)

1 THE COURT: The jurors are all here, so we'll
2 bring them in. We'll bring Dr. Schmidt back up.

3 MR. OUSSAYEF: Your Honor, one thing. Today is
4 the deadline the Court had for jury instructions. We would
5 ask if we could have until Monday at noon to work out
6 additional instructions.

7 THE COURT: Monday at noon is fine.

8 MR. OUSSAYEF: Thank you, Your Honor.

9 THE COURT: I understand that is a joint
10 request.

11 MS. SHAMILOV: Yes.

12 THE COURT: That's fine.

13 (Jury returned.)

14 THE COURT: Good morning, members of the jury.
15 Welcome back. It's nice to see you all again.

16 And good morning, Dr. Schmidt.

17 THE WITNESS: Good morning.

18 THE COURT: I remind you, of course, you remain
19 under oath.

20 THE WITNESS: Yes, sir.

21 ... DR. DOUGLAS CRAIG SCHMIDT, previously sworn
22 under oath, was examined and testified further as follows ...

23 THE COURT: Mr. Oussayef, good morning.

24 And Mr. Hadden, good morning as well.

25 Mr. Oussayef, you may begin when you are ready.

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1 MR. OUSSAYEF: Thank you, Your Honor.

2 DIRECT EXAMINATION

3 BY MR. OUSSAYEF:

4 Q. Dr. Schmidt, I'd like to orient us where we were in
5 your analysis of the claims. So we were talking about claim
6 1 of the '967 patent, is that right?

7 A. That's correct.

8 Q. And we were talking about the last element, Element
9 1(c), is that correct?

10 A. Yes.

11 Q. So I see that is what we have here on slide 137 here.
12 So I'd like to ask you to tell us what part of the claim
13 element you are addressing here.

14 A. So this is looking at the first part of element 1(c)
15 which is highlighted in yellow, and that has been construed
16 by the Court to mean "generating concurrently with the first
17 partition at least a second partition for presenting a
18 plurality of command functions."

19 Q. So I see here on slide 137 you have a new color here
20 in purple. Could you explain what you are showing here?

21 A. So these are command functions which include, among
22 other things, local goods, getaways, coupons, and so on.

23 Q. And are they presented at the same time as the second
24 area and the first area?

25 A. Yes, and they're presented as part of the second

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1 area.

2 Q. Now, if we move on to the next slide here, can you
3 tell us what we're seeing here with the human language on
4 the left and the computer language on the right?

5 A. Yes. This is kind of zooming back in showing
6 portions of that Hypertext market language or HTML computer
7 language code. If you take a look, you can see that we are
8 culling out the div class header-V2 portion of that code,
9 that HTML code. And within that we're also pointing out
10 outlined in purple some of the list elements that are used
11 to generate the various command functions that we see on the
12 left-hand side within the purple portion inside the blue box
13 the left.

14 Q. And Dr. Schmidt, because it's a little faint on
15 exhibit PX 964, can you give us a couple of examples of
16 what's in the purple box there?

17 A. Sure. You can see, if you squint really hard, local,
18 goods, getaways, coupons, you have the same thing we have
19 been talking about before.

20 Q. Does that correspond with anything on PX-965 on the
21 right?

22 A. If you take a look, it's a little hard to see, if you
23 take a look at the second list item that starts out less
24 than RI, it says nav local, on the right it says nav goods,
25 and then it says nav getaways, and then nav coupons and

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1 those are basically defining the elements that show up on
2 the left-hand side as the command functions.

3 Q. So now I'm looking to slide 139 here. I see you have
4 blown this up a little bit, but first let me ask you, what
5 part of the claim element are you addressing here?

6 A. So here I'm dealing with the second part of claim
7 element 1C which is the part that says the command functions
8 including at least a first group which are selectable to
9 permit movement between applications.

10 Q. And which part of the header here did you analyze in
11 slide 139?

12 A. So for all the command functions that are listed in
13 that second area of command bar portion, I'm underlining the
14 command functions which are selectable to permit movement
15 between applications.

16 Q. So let's see slide 140 here. Can you remind us of
17 the Court's definition of applications?

18 A. So if you recall, an application is information event
19 or information events composed of a sequence of one or more
20 pages opened at a screen.

21 Q. I believe we have a short animation here. Can you
22 tell us what's going on when I play the animation, please?

23 A. Sure. We're up on the home screen, Groupon, now
24 we're navigating to the locals application, so we're moving
25 from the home screen to locals application.

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1 Q. How does the user tell Groupon and allow Groupon to
2 bring the user to the new application?

3 A. They click on that command function where the little
4 cursor is shown, it says local.

5 Q. Now, let's see what happens in this animation. Can
6 you tell us what's happening?

7 A. Down here we're selecting a local deal which brings
8 up a more detailed view of that deal.

9 Q. And now if we play the next slide, what's going on
10 here?

11 A. Now, we're navigating from within a page in the local
12 deals application to a new application, we're moving between
13 applications, we're moving local over to goods, now we're in
14 the goods application.

15 Q. Now that you have shown us navigating from, you know,
16 one page in the application to the next and going from
17 application to application, how does that factor into your
18 analysis?

19 A. So this is essentially demonstrating that these
20 command functions are selectable, you can click on them, for
21 example, to permit movement between applications.

22 Q. So looking at slide 147, it's your opinion that
23 Groupon performs the generating concurrently element of
24 claim 1 of the '967 patent?

25 A. Yes, that is correct.

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1 Q. Can you remind us of your opinion regarding claim 2
2 of the '967 patent?

3 A. It's my opinion that Groupon infringes claim 2 of the
4 '967 patent.

5 Q. Now, looking at claim 2, can you tell us what you're
6 showing here in slide 149 with claim 1 on the left and claim
7 2 on the right?

8 A. Sure. So we just talked about claim 1, and I showed
9 how Groupon performs all the steps and therefore infringes
10 claim 1. Claim 2 starts out with a highlighted phrase that
11 says the method of claim 1 and that's basically showing that
12 claim 2 depends upon claim 1. So in order for claim 2 to be
13 infringed, claim 1 also has to be infringed, which I've
14 already shown.

15 Q. So here on slide 150, I see you have a checkmark
16 already in the method of claim 1. Why is that the case?

17 A. As we just saw through the previous testimony, I
18 showed that Groupon performed all those steps for claim 1 so
19 they infringed that claim.

20 Q. Let's move on to the first part of claim 2 here after
21 the part that says the method of claim 1. And it's wherein
22 the data structure of the object includes a header and one
23 or more data segments. So looking at the next slide here,
24 has the Court construed any terms in this claim element?

25 A. Yes. The term object is construed. We have seen

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1 this term construed before and it means the same as we
2 talked about earlier, a data structure or data structures.

3 Q. Looking at slide 153, what are you showing here?

4 A. So this is that element about wherein the data
5 structure of the object includes a header and one or more
6 data segments. And what I'm showing here is that an HTTP
7 response data structure, the thing that comes back from
8 Groupon servers back to the client, the reception system,
9 includes headers and data sections such as the image data.
10 What we see here if you take a look at exhibit PX-965 we see
11 a view of the server's response that's coming back to
12 Groupon's servers and you can see it's clearly marked, there
13 is a bunch of letters up there, including things we talked
14 about before including the cache control header and so on.
15 It also includes the data segment which would be the image
16 data, for example, for the font of the shopping cart here.

17 Q. Is it your opinion that Groupon performs this element
18 that says wherein the data structure of the object includes
19 a header and one or more data segments?

20 A. Yes, that's correct.

21 Q. Let's move on to the last element of claim 2. Did
22 the Court construe any claim terms in the last element of
23 claim 2?

24 A. Yes, several of these terms you have seen before,
25 applications, partitions, we just talked about command

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1 functions. And this particular claim element includes a new
2 claim term which is permit random movement.

3 Q. We will go into that as we go through the next set of
4 slides?

5 A. Yes, absolutely. I'll explain what that means.

6 Q. Looking at slide 157, can you tell us how the Court
7 has construed permit random movement?

8 A. So permit random movement has been construed as
9 meaning allow navigation to other applications at the user's
10 behest or at the will of the user.

11 Q. And looking at slide 157, what are you showing here
12 with the home page of Groupon on the left and then a
13 particular page of Groupon on the right?

14 A. So what we're showing here is how Groupon implements
15 the random movement or the ability to navigate from one
16 application to another. So here we are -- we're on the home
17 page at the moment and we're going to navigate to another
18 application. In this case it's the local application of the
19 local deals application. And you recall I showed you some
20 of that HTML code on the right-hand side a few slides
21 earlier. That HTML code is actually what's used to
22 implement clicking on that local link. When you click on
23 the local link, you take a real careful look there, you see
24 that it has an H ref, it is a description of the hyperlink
25 and that hyperlink says browse Nashville context local, what

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1 that does is that combines it with Groupon's home page URL
2 and it ends up navigating the browser to what you see on the
3 right-hand side so that complete URL or the hyperlink that's
4 been opened allowing the user to navigate to the local
5 application.

6 Q. Looking at slide 158, is it your opinion that Groupon
7 performs the last element of claim 2?

8 A. That's correct.

9 Q. So we have been focusing a little bit more on
10 Groupon's desktop website. I would like to talk a little
11 bit about Groupon's mobile website. What's your opinion
12 about Groupon's mobile website?

13 A. It's my opinion that Groupon's mobile website
14 infringes claim 1 and 2 of the '967 patent.

15 Q. Looking at slide 160, what are you referencing here
16 with the title of the slide?

17 A. So this slide, the title basically explains the fact
18 that the differences between the mobile website and the
19 desktop or laptop website that we talked about before
20 doesn't affect the infringement, Groupon's infringement of
21 claim 1 of the '967 patent.

22 Q. And so looking at PX-967 on the left and PX-968 on
23 the right, does the mobile website have a first area and a
24 second area?

25 A. You can see on the left-hand side you can see the

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1 form factor of the mobile application, this happens to be
2 Android, but it could be iPhone for that matter, what we're
3 seeing here that is we have two areas, the first area is in
4 red, and the second area is in blue, it's a little hard to
5 see it, but it's basically where the green command bar is
6 with the various command functions.

7 I show in PX-968 how Groupon generates HTML
8 codes. It generates that red portion to the left-hand side,
9 the first area on the left-hand side and they also generate
10 codes in their server which contains the divs and the other
11 HTML elements that are on the second area in PX-968 and that
12 will be used to generate that portion as the command bar
13 portion of the command function.

14 Q. And looking at slide 161, do the differences between
15 the mobile website and the desktop website affect
16 infringement for claim 2?

17 A. No, the differences doesn't affect the infringement
18 for claim 2. As before, you can see that we have got
19 command functions, goods, getaways, for example, and as
20 before the user can permit random movement, they can select
21 these particular command functions in order to move back and
22 forth between the various applications on the mobile device
23 just like they can do for the desktop and laptop version.

24 Q. So is it your opinion that Groupon's mobile website
25 infringes claim 1 of the '967 patent?

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1 A. Yes, that's correct.

2 Q. And then looking at claim 2, is it your opinion that
3 Groupon's mobile website infringes claim 2 of the '967
4 patent?

5 A. Yes, that's correct.

6 Q. So now I would like to talk a little bit about how
7 Groupon's website and mobile apps infringed in the past, so
8 I would like to ask you what evidence did you review about
9 how Groupon's website and mobile apps functioned in the
10 past.

11 A. So, I reviewed a number of pieces of evidence, but I
12 want to iterate, reiterate first that it's my opinion that
13 Groupon's website infringed claims 1 and 8 of the '849 and
14 claims 1 and 2 of the '967 patent since November of 2008,
15 and they also, the mobile app version, the IOS mobile app
16 version for the iPhone has infringed claims 1 and 8 of the
17 '849 patent since March 2010, and the Android mobile apps
18 has infringed claims 1 and 8 of the '849 patent since July
19 of 2010.

20 Q. Then looking at the left here on the bottom, did you
21 review past versions of Groupon's website and mobile
22 applications?

23 A. Yes, I reviewed a number of exhibits that showed
24 screen shots and other views of Groupon's mobile apps and
25 website. You see a picture here from Groupon's website from

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1 2009, PX-727, there is a view of Groupon's mobile
2 applications 2010, Exhibit 1054, for example.

3 Q. Did you review Groupon's past source code?

4 A. Yes. As I mentioned earlier, I reviewed -- I had
5 access to Groupon's code going back in time, and so I
6 reviewed various logs that showed the changes that they
7 made. I reviewed the source code itself to see what the
8 source code looked like. The logs I reviewed were exhibit
9 PX-1501 and the source code computer code I reviewed was
10 PX-1112.

11 MR. OUSSAYEF: Your Honor, I offer PX-727,
12 PX-1054, PX-1501 and PX-1112.

13 MR. HADDEN: No objection.

14 THE COURT: Those are all admitted.

15 (The above exhibits were admitted.)

16 BY MR. OUSSAYEF:

17 Q. Did you review any testimony of Groupon's engineers
18 and employees?

19 A. Yes, I reviewed the testimony of Ms. Sandridge,
20 Mr. Dunham and Mr. Krems.

21 Q. And how about past technical documents from Groupon?

22 A. Yes, I also reviewed various Groupon technical
23 documents such as PX-625.

24 Q. Did you review anything of else in your analysis the
25 past services of Groupon?

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1 A. Yes. Groupon made a description of past versions,
2 what things changed over time. I reviewed those and found
3 the changes identified had no material impact on my
4 infringement analysis. And that was PX-497.

5 MR. OUSSAYEF: Your Honor, I offer PX-625 and
6 PX-497.

7 MR. HADDEN: No objection.

8 THE COURT: It's admitted.

9 (The above exhibits were admitted.)

10 BY MR. OUSSAYEF:

11 Q. I would like to talk a little bit more about the
12 materials you reviewed. Can you tell us, did you also
13 review as shown the bottom of slide 165, PX-463, 464, 465,
14 723, 724, 725, 726, 728, 729, 1055, 1056, 1057, 1058, 1059,
15 1064, 1079, and 1096?

16 A. Yes, I did.

17 MR. OUSSAYEF: Your Honor, I offer those exhibit
18 as well.

19 MR. HADDEN: No objection.

20 THE COURT: They're all admitted.

21 (The above exhibits were admitted.)

22 BY MR. OUSSAYEF:

23 Q. So now we have gone through the elements of the
24 patents. I would like to talk a little bit about your
25 analysis of how Groupon uses those patents. What are you

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1 showing here on slide 166?

2 A. So I used two different methods for being able to
3 analyze Groupon's extended use of the patent technology in
4 the '849 and '967 patents, and what we'll talk about them in
5 detail, but at a high level for the '849 patent I looked at
6 the percentage of advertisements with badges or urgency
7 messages which are used to draw attention to the ads. And
8 the '967 patent I looked at the percent of Groupon's
9 cacheable objects, these are objects that Groupon gave cache
10 value that were greater than zero. For both the '849 and
11 '967 patents I also did a second method where I looked at
12 the percentage of repeated page views to see the benefits of
13 the cache values.

14 Q. So looking on slide 167, can you tell us a little bit
15 more about Step 1 for the '967 patent?

16 A. So if you recall, Groupon sets headers and sets the
17 cache max age header for various objects that they download
18 from their web servers. And so I used my Chrome Dev tools
19 facility using the HTTP archive mechanism I mentioned before
20 being able to look at all the traffic that goes back and
21 forth between the client and the server. And in this
22 particular case, I was focusing on the desktop or laptop
23 version. And I took a look at all the cache, at all the
24 objects that are downloaded that have cache control headers
25 that are greater than zero. So they're intended to be

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1 cached. So this is essentially the percentage of Groupon's
2 cacheable objects.

3 What I found is at the very least there is at
4 least 59.2 percent of the objects that come down are cached.
5 Sometimes there will be more than that, but that is at least
6 the amount they found to my knowledge.

7 Q. So now sticking with your analysis of the extended
8 use for the '967 patent, what are you showing on slide 168?

9 A. So to think about caching, what is the benefit of
10 caching? The idea is if you download something to the
11 user's computer and at some point let's say in the morning
12 on January 1st, and then the user does a bunch of other
13 things on their computer and comes back later in the day and
14 revisits that page or a page that has that downloaded
15 content, an image or an application object and so on, that
16 will demonstrate repeated views that are nonunique that can
17 reuse or benefit from having cached that information. The
18 basic point is you don't have to go back out to the network
19 and download it all over again.

20 Q. And then looking on slide 169. Just at a high level,
21 how did you use that data?

22 A. So essentially I had access to the total number of
23 deals views, that Groupon keeps track of the total number of
24 deal views done each week, for example. So I took the total
25 number of deal views that they had and then I subtracted the

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1 number of unique deal views. These are views that only seen
2 one time. And subtracting the total views from the unique
3 views gives the benefits of caching. These are the
4 non-unique views. These are the ones being used over and
5 over again because people come back and look at them. And I
6 took that number, that difference, and I divide it by the
7 total number of deal views and that gives a percentage of
8 repeat page views, essentially illustrating Groupon's
9 extended use of caching for reusable objects.

10 Q. And just for the record, I'd like to go back to slide
11 167 and ask you what exhibit did you refer to for extended
12 views?

13 A. This is PX-525, Schedule A.

14 MR. OUSSAYEF: Your Honor, I offer that exhibit.

15 MR. HADDEN: No objection.

16 THE COURT: It's admitted.

17 (PX-525 was admitted into evidence.)

18 MR. OUSSAYEF: So now I'd like to bring you to
19 the slide 170 and ask you, and switch gears a little bit to
20 just talk about the '849 patent. Can you tell us about your
21 analysis for extended views there?

22 A. Sure. So as you recall, the '849 patent is talking
23 about presenting advertising. The '947 was talking about
24 presenting applications.

25 So here what is the question is what is the

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1 percentage of advertisements that Groupon downloads in their
2 servers that contain badges or some other type of urgency
3 messages that draws the user's attention to the advertiser.
4 I just showed an example up here of a couple of
5 advertisements that have trending badges highlighted. You
6 will notice some have trending badges highlighted, some
7 don't have trending badges.

8 So in Exhibit PX-973 and 526, Schedule B, I was
9 able to once again take a look at the traffic that goes back
10 and forth between the client and the server, Groupon's
11 server, and see which of those things that are downloaded
12 will contain these badges. And so I could actually see the
13 badges being downloaded. I could look at the screen. So I
14 essentially counted up the number and then I divided by the
15 total number of advertisements that were on a page. And
16 there were at least 52.7 percent. There was some, some
17 variance, say, the mobile version perhaps had more but this
18 was at least 52.7.

19 Q. And, Dr. Schmidt, why did you look at urgency
20 messaging?

21 A. Urgency messages are another way that Groupon draws
22 attention to their -- to a particular advertisement. It
23 will say something like sale ends the end of the week or
24 something like that.

25 MR. OUSSAYEF: Your Honor, I offer PX-973 and

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1 526.

2 MR. HADDEN: No objection.

3 THE COURT: They're both admitted.

4 (PX-973 and PX-526 were admitted into evidence.)

5 BY MR. OUSSAYEF:

6 Q. Okay. Now looking at slide 171. This looks
7 familiar, this slide, but I think you are talking about the
8 '849 patent. Can you remind us of your analysis here?

9 A. That's correct. For the '849 patent, same basic
10 idea. In this case, I was looking at the percentage of
11 repeated page views for advertisements. So in this case, we
12 would be looking at the pizza ad, for instance, and if a
13 person looked on a local deals page early in the morning,
14 did a bunch of other things on their computer and came back
15 later that day, say, in the evening and went back to that
16 page, they would benefit from the object being cached.

17 Q. So looking at slide 172. Can you just summarize your
18 analysis for the '849 patent and the '967 patent?

19 A. So for the first method, they talked about where I
20 was looking at percentages, either pages of advertisements
21 with badges, urgency messages, or percentages of cacheable
22 objects, I found that for the '849 patent it was about
23 52.7 percent at least were marked with those badge urgency
24 messages. And for the '967 patent, around at least
25 59.2 percent objects that Groupon downloads are cache or

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1 cacheable.

2 Q. And then can you remind us, just looking at slide
3 173, what your analysis was for both patents?

4 A. So essentially what I'm showing for the second deal
5 or the second method is the formula where the number of deal
6 views minus the number of unique deal views divided by the
7 deal views gives the percentage of repeated page views.

8 Q. Thank you, Dr. Schmidt. I'd like to now move to a
9 different subject, the '601 601 patent. So looking at slide
10 173, can you remind us of your opinion with respect to the
11 '601 patent?

12 A. So it's my opinion that Groupon infringes claims 51
13 and 54 of the '601 patent.

14 Q. Then here on slide 175, I see you have an excerpt of
15 claim 51 of the '601 patent?

16 A. Yes. These are the elements that make up claim 51.

17 Q. Then once again on slide 176, you have them color
18 coded?

19 A. That's correct?

20 Q. So let's start with the preamble on claim 51.
21 Looking at slide 178, has the Court construed any terms in
22 the preamble of claim 51?

23 A. Yes. There are four terms here: "state
24 information," "conversations," "stateless protocol," and
25 "client." And these have interesting Court constructions

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1 that we'll talk about at length as we go through the slides.

2 Q. So now looking at slide 179, let's talk about the
3 Court's construction of "conversations." What is that
4 construction?

5 A. So as you can see, the claim language itself says "a
6 computerized method for preserving state information in a
7 conversation" -- which I will expand on in a second -- "by a
8 stateless protocol between a client adapted to request
9 services from one or more servers."

10 So the underlying term is "conversation." And
11 that has been given a specific meaning by the Court. And
12 the meaning of "conversation" is "a sequence of
13 communications between a client and a server in which the
14 server responds to each request with a set of continuations
15 and the client always picks the next request from the set of
16 continuations."

17 And what makes this particular claim element a
18 little bit subtle is the word "continuations" is also
19 construed, and I will give you that formal definition
20 shortly. But in a nutshell, "continuation" means "a new
21 request which a client may send to a server such as, for
22 example, a hyperlink."

23 Q. And looking at slide 179, what are you showing here
24 with the client on the left and the Groupon servers on the
25 right?

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1 A. So because this is a long claim and it's somewhat
2 subtle, I'm going to kind of walk through step by step
3 showing you what happens with the conversation.

4 So just to set up the stage, there is a client
5 on the left-hand side which is software running on a
6 computer, say, for a web browser, being a web browser, for
7 example, and on the right-hand side I show Groupon's
8 servers.

9 Q. So let's go on to the next part of the slide and tell
10 us what you are showing here.

11 A. So what I'm showing here is a user may decide to
12 navigate to the goods application. And that would cause a
13 request to be sent from the client shown as the gray area --
14 gray arrow at the top, and that request goes over to the
15 servers, Groupon's servers, and the servers do some
16 processing, and they send back HTML and other data. And
17 that data comes back and then is used to generate the screen
18 display that I show on the left-hand side. And that screen
19 display is the goods application.

20 And included in the goods application HTML will
21 be a set of continuations or hyperlinks. N each of those
22 hyperlinks, there will be a hyperlink for every one of the
23 goods deal that displays there that you can click on, and
24 each of the hyperlinks will contain state information to
25 uniquely identify each of those deals.

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1 Q. So now looking at the next part of slide 179, what
2 are you showing here?

3 A. So now let's assume that the client would like to
4 look at more details about a deal. So let's say that they
5 click on a particular link for a deal. Now, let's say for
6 sake of argument that deal is the My Three Treasures
7 pendant.

8 And so what will happen is a request will be
9 sent from the client over to the server, and that request
10 will include some state information that indicates which
11 deal we want to be finding more information about in this
12 case the My Three Treasures pendant. And that will go over
13 to the servers, and the servers will do some processing, and
14 they will send back HTML and other data that will be used in
15 order to generate the display we see on the left-hand side.
16 And contained as part of the HTML that comes back and is
17 displayed will be another continuation, which is a hyperlink
18 in this case that will be used to show what Groupon calls
19 the purchase cluster, which is the part of the right-hand
20 side of the screen that has the green buy button, -- it's a
21 little hard to see but there is a green button that says
22 "buy" along with options or option that the user can select.

23 So in that case, what will be encoded in that
24 continuation or that hyperlink will be state information for
25 the particular deal or good the user is interested, which in

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1 this case is the My Three Treasures pendant as well as some
2 other state information that indicates the particular option
3 or options that are available.

4 Q. And, Dr. Schmidt, will we get into more details about
5 exactly how all of those steps happen later on in these
6 slides?

7 A. Absolutely. Right now, I'm just explaining what a
8 conversation is.

9 Q. So now what is shown on this next part the slide 179?

10 A. So let's say the user is actually interested in
11 purchasing that particular good. So they could click on
12 the buy button, and that would take that hyperlink, that
13 continuation that has been downloaded from the server, and
14 it will send a request back over to the client, including
15 the state information for the deal, and the particular
16 option that the user wants to select.

17 That will go to Groupon servers. They'll
18 process that request. They'll send back HTML and other data
19 that will be used to generate the screen that we see on the
20 left-hand side which allows the user to enter in their
21 credit card information.

22 And there is also the purchase cluster, which is
23 hard to see, but it says place order in the green "buy"
24 button. And so if the user decides that after they entered
25 their credit card information, they would like to buy the

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1 item, they press the place order button, and that sends
2 yet another request back to the server with the state
3 information embedded in it in order to be able to purchase
4 that particular good.

5 Q. And what exhibits are you referring to here on slide
6 179?

7 A. So these are Exhibits 963 and 964 illustrating this
8 conversation back and forth to carry out the e-commerce
9 transaction.

10 Q. So now let's look at slide 180 here. What portion of
11 the claim element are you addressing here?

12 A. So now I'm zooming in on the state element or, sorry,
13 state information portion of the beginning part of the
14 preamble for claim 51.

15 Q. And what, how has the Court construed "state
16 information?"

17 A. "State information" is defined as "information about
18 a conversation between a client and a server."

19 Q. And did you review any Groupon testimony relevant to
20 state information?

21 A. I did. Mr. Krems, who is a principal engineer at
22 Groupon, was asked: Does Groupon track information about
23 the deal that the user is purchasing during the sequence of
24 pages?

25 And he answered: Yes.

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1 And then he was asked: Do you know any
2 variables associated with the deal or the final purchase
3 that Groupon tracks?

4 And he said the deal ID.

5 And we just seen an example of a deal ID which
6 is a particular good that the user was interested in; My
7 Three Treasures pendant, for example.

8 Q. So now let's look at slide 181 here. What portion of
9 the claim element are you addressing here?

10 A. Here, we're addressing the "via a stateless protocol"
11 of the preamble.

12 Q. How has the Court construed "stateless protocol?"

13 A. So "stateless protocol" is defined as "the protocol
14 where every request from a client to a server is treated
15 independently of previous connections."

16 Q. And what are you showing here at the bottom of slide
17 181 with the back-and-forth communications again?

18 A. So without going back into detail of all the
19 conversation, all this is showing is that conversation we
20 saw earlier is being send or requests and the responses are
21 being sent back and forth using the HTTP protocol or the
22 Hypertext Transfer Protocol.

23 Q. In looking at slide 182 here, is HTTP a stateless
24 protocol?

25 A. Yes. This is a quote from the patent that says:

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1 HTTP is example of a stateless protocol, which means that
2 every request from a client to server is treated
3 independently.

4 Q. Now, in your own expert opinion, is HTTP also a
5 stateless protocol in your opinion?

6 A. HTTP certainly is a stateless protocol in my opinion.

7 Q. Now, looking at slide 183 here. Is it your opinion
8 that Groupon performs the preamble of claim 51?

9 A. Yes, that's correct.

10 Q. Let's move on to the receiving step. Did the Court
11 construe, looking at slide 185, any portion of that claim
12 element?

13 A. Yes, the Court construed the term "stateless
14 protocol" which we talked about and also the term "state
15 information" which we also talked about.

16 Q. So let take a look on slide 186. What are you
17 showing here with reference to PX-964 on the top?

18 A. So PX-964 is just the typical client we have been
19 showing which is demonstrating the desktop or laptop browser
20 that is being used to send requests.

21 Q. What are you showing with respect to PX-919?

22 A. So PX-176 are some elements from a Groupon document
23 called the shared layout service. And what this is showing
24 is that the client is accessed by a user to send requests to
25 Groupon. You can see a request is being send out from the

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1 client computer. And it's also then showing on the kind of
2 middle to the right-hand portion, it is showing Groupon's
3 service oriented architecture which is the way in which they
4 take user requests and then handle those requests in a bunch
5 of different services. So you can see there is a routing
6 service. You can see there is a backend service. There are
7 several backend services. There is a service called the
8 Layout Service that we'll talk more about.

9 So Groupon with this picture is showing with
10 Groupon's document that they take user requests and they
11 service them in service oriented architectures, the various
12 services to carry out those requests.

13 Q. Looking on slide 167. Did you review any deposition
14 testimony about services and service requests?

15 A. Yes. So this is Mr. Dunham, the Groupon corporate
16 witness.

17 And he is asked a question: What does it mean
18 to be a server oriented architecture?

19 And he said: A service oriented architecture,
20 certain pieces of business logic are isolated within one
21 specific running application that's dedicated to that
22 business logic. So in order for the frontend client to do
23 multiple things, they may call several different services,
24 and they require different pieces of business logic.

25 Q. So looking at slide 188. What portion of the claim

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1 element are you dealing with here?

2 A. So here, we're kind of zooming in on the "state
3 information" portion, which is construed.

4 Q. And how has the Court construed that?

5 A. It's construed as "information about a conversation
6 between a client and a server."

7 Q. Okay. So now let's look at, in a little bit more
8 detail, slide 188. What are you showing here with the
9 client on the left and the Groupon servers on the right?

10 A. So what I'm showing here, we have a client. This is
11 the point where the client is on the goods page, goods
12 application, and the client has decided they're interested
13 in the My Three Treasures pendant good. So they're going
14 to click on that hyperlink. And that link will generate a
15 request and that request will go over to Groupon's servers.

16 And if you look at Exhibit PX-965, it is a
17 little hard to see, but what I'm highlighting there is state
18 information. And what that state information says, that's
19 the yellow part that is highlighted and underlined in red:
20 It says GG -- which is their code for Groupon goods -- -AJS
21 -collection-custom-my-three-treasures.

22 And as you will see, that is a unique identifier
23 that identifies this deal. They call it a deal code, but
24 it's a unique code for that unique good.

25 Q. And then looking at the bottom of PX-176, I see you

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1 are referring back to this same diagram there?

2 A. That's correct. That is just illustrating Groupon's
3 service oriented architecture with the multiple services,
4 the multiple backend services, including the Layout Service
5 and so on. And that is what will be receiving this service
6 request which includes the state information.

7 Q. So now looking at slide 189 here. Do you view any
8 deposition testimony that is relevant to your opinion about
9 service requests, including state information?

10 A. Yes. Mr. Sood, who is the Director of Engineering at
11 Groupon, defines a couple of terms we have been talking about.

12 So he is asked: What is a deal permalink?

13 And he said: It's a unique identifier for a
14 deal.

15 Like the My Three Treasures pendant that we
16 looked at.

17 And then up above, he is asked: When Groupon's
18 receive that URL, how do the servers know what deal I'm
19 buying?

20 And so then he mentioned something called a
21 pledge ID.

22 And then he is asked: So the pledge ID is
23 included in the request that's sent to Groupon's servers, at
24 least.

25 And he agrees: Yes.

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1 And we'll talk more about pledge ID shortly.

2 Q. So looking at slide 189, is it your opinion that
3 Groupon performs the receiving the service request element
4 of claim 51?

5 A. Yes, that's correct.

6 Q. So let's move on to the identifying all continuations
7 element. Did the Court construe any claim terms in the
8 identifying all continuations element?

9 A. Yes, the term continuation is formally defined here.
10 We talked about it before.

11 Q. So looking on slide 193, what portion of the claim
12 element are you addressing here?

13 A. So this is the portion of the claim element
14 highlighted in yellow that says an output from said service.

15 Q. And what are you showing in PX-176 there with the
16 highlighting?

17 A. So PX-176 is this Groupon shared layout service
18 document, and it contains this diagram is a descriptions of
19 what this diagram means. What this diagram is showing is
20 it's showing one of the services in the services
21 architecture, this is called the layout service. If you
22 read the little portion, the first bullet in red that's
23 underneath the call out that says layout service, it says
24 the layout service is a service that serves for outputs
25 Mustache templates.

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1 Q. That's a strange name. Why is it called Mustache
2 templates? I'll show you something here on 193.

3 A. So if you take a look at the box that's highlighted
4 in the yellow and it's arranged with a red boarder, you can
5 see it has this open curly brace, open curly brace Mustache,
6 close curly base, close curly base.

7 If you were to turn your head to one side or the
8 other and squint really hard, the reason it's called a
9 Mustache template is the curly braces look like the
10 handlebar mustache that I'm showing here on the left-hand
11 side. That's where the word mustache comes from.

12 Q. Thank you, Dr. Schmidt. Looking at slide 194 here,
13 did you review any deposition testimony that was relevant to
14 your analysis of this portion of the claim element?

15 A. Yes, Mr. Dunham, Groupon's corporate witness
16 explained in answer to the question:

17 "Question: What is a Mustache template?

18 "Answer: It's a file that specifies basically
19 the skeleton of an HTML document or a portion of an HTML
20 document with sections that can be filled in with data."

21 Q. And will we look at the portion of the HTML document
22 in question later on in these slides?

23 A. Absolutely.

24 Q. So let's take a look at slide 195 here. What portion
25 of the claim element are we addressing here?

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1 A. So this is the part highlighted first in yellow that
2 says identifying all continuations.

3 Q. And what is the Court's definition of a continuation?

4 A. So here is the formal definition. A continuation or
5 continuations is a new request which a client may send to a
6 server, such as, for example, a hyperlink.

7 Q. So looking on slide 155 here, what are you showing
8 with the human language on the left in PX-964 and the
9 computer language on the right in exhibit PX-1224?

10 A. So we're showing a bunch of interesting things here.
11 Let's start with PX-1224. First and foremost this is an
12 example of a Mustache template. You heard Mr. Dunham
13 describe it as a being a portion of the HTML file because
14 the name of the file ends in dot Mustache, that's the file
15 extension, Mustache template. You also notice that it says
16 dot HTML is part of the file.

17 If you take a little hard squint in there, it's
18 extremely hard to see, but halfway down on line 16 you'll
19 see div class equals, et cetera, et cetera. This is an
20 example of HTML. This is a template for HTML or a portion
21 of HTML.

22 If you also squint really hard you'll see there
23 is lots of open curly braces and closed curly braces.
24 That's a Mustache template. I'll explain what I show in
25 yellow in just a second, but first I want to explain what it

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1 means to be a continual option Mustache template.

2 If you take a look on the left-hand side you'll
3 see a red box around the purchase cluster which is
4 containing the buy button that the user can click to
5 continue the conversation with the business. We'll talk
6 about that in a second.

7 What I want you to notice is that there is one
8 green little circle in there and that's the option that a
9 user can select to buy that particular good. It says one
10 custom My Three Treasures necklace. This is a single option
11 Mustache template and it will generate a purchase cluster
12 with a single option. On the left-hand side, that's what
13 I'm showing. We'll talk about that later.

14 Q. Does the Mustache template in PX-1224 correspond to
15 the entire page on PX-964?

16 A. No, it's simply the part that's shown in that red
17 box, the purchase cluster, and that's essentially the output
18 from the layout service which we talked about on the
19 previous page, that's the part that gets output and that's
20 the part that gets displayed in that portion of that screen.

21 Q. So now let's go back to PX-1224. Can you tell us
22 what you're showing in the highlighted?

23 A. In the highlighting, this is line seven and eight.
24 I'm focusing particularly on line eight. This is part of
25 the Mustache template and it says HREF which is pronounced

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1 HREF. It says HREF equals, and you see a string and inside
2 that string starts with double quotes and ends with double
3 quotes. Inside the string we see open curly brace, open
4 curly brace, those are the mustaches, then you see the
5 string URL, and we see close curly brace, close curly brace.
6 And what that is in a mustache template is it's defining an
7 HREF or a hyperlink as an example of a so-called
8 continuation.

9 Q. What is the URL with the two curly braces mean?

10 A. So this is a placeholder that will be filled in with
11 embedded state information -- I'll show you that in a second
12 -- to actually provide a way to access this particular deal
13 by the client when they click the buy button that shows up
14 in the screen on the left-hand side.

15 Q. So looking at slide 196, did you review any
16 deposition testimony, any testimony from the witnesses here
17 that was relevant to your analysis of identifying all
18 continuations?

19 A. Yes. So if you recall, we identified lines seven and
20 eight in that Mustache template on the previous slide.

21 Mr. Dunham was asked, how do you identify that line seven
22 and eight correspond to a hyperlink. And he answers, the
23 HREF, or HREF letters specifying that URL, we had an URL
24 there, which is based on the curly braces data, those are
25 those Mustache curly braces we looked at, that's a

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1 placeholder for data that would be filled in.

2 Q. And how about Groupon's technical expert witness,
3 what does he say about Mustache templates?

4 A. So's he asked the question, Mustache templates work
5 by applying a find and replace to insert values for
6 placeholders; right? And he agrees, that's my
7 understanding.

8 Q. So looking at slide 197, is it your opinion that
9 Groupon performs the identifying all continuations element
10 of claim 51?

11 A. Yes, that's correct.

12 Q. Let's go on to the recursively embedding step. Did
13 the Court construe looking at slide 199, did the Court
14 construe any terms for this element?

15 A. Yes, the term recursively embedding the state
16 information in all identified continuations.

17 Q. Let's take a look at that on slide 200. So can you
18 tell us how the Court's definition applies to the claim
19 language here?

20 A. Sure. So the Court has defined or construed that
21 element as meaning applying a process one or more times to
22 each identified continuation to modify all identified
23 continuations to include state information. So that's the
24 construction.

25 Q. So looking at the human language on the left and the

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1 computer language on the right, is this the same two files
2 that we were looking at previously?

3 A. Yes. So on the left-hand side we're showing the
4 purchase cluster which has the output for the layout
5 service, this is PX-964 and the red box, and on the
6 right-hand side we have that same Mustache template that we
7 talked about before and you can see once again that it's got
8 that HREF equals and the funny Mustache surrounding the URL
9 strings.

10 But what I'm showing here is actually what's
11 described in the Court's construction. So what Groupon's
12 server code does is it essentially has a process that is
13 applied one or more times, in other words, for each
14 identified continuation it would be applied, so for that
15 identified continuation, that one that says HREF equals left
16 curly brace, left curly brace, URL, close curly brace, close
17 curly brace, it will go ahead and modify that continuation
18 to include state information.

19 And what you see on the yellow box underneath is
20 the modified continuation which as you can tell, I'll
21 explain is a URL that will get you back to Groupon and it
22 includes the state information, it includes the collection,
23 custom My Three Treasures deal permalink that identifies the
24 deal, and it includes this pledge ID which is an indication
25 of the particular option that the user would have a chance

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1 to select in the red box on the left-hand side in Exhibit
2 964.

3 Q. And you're referring here to PX-1224 and PX-1344 for
4 the computer language code that you're relying on?

5 A. That's correct.

6 Q. Looking at the Mustache template here, there is only
7 one continuation in this Mustache template; is that right?

8 A. That's correct. And that's because it's a single
9 option deal, so My Three Treasures necklace or pendant as
10 you can see in the box on the left-hand side in Exhibit 964,
11 that only has one option so that is only one continuation.

12 Q. Did you also look at multi-option deals as well?

13 A. I did, and we'll talk about those shortly.

14 Q. Now, looking at slide 201 here, did you review any
15 deposition testimony to inform your opinion about this claim
16 element?

17 A. Yes. I looked at Mr. Dunham and Dr. Weissman's
18 testimony, and these are the same testimonies as before
19 explaining how hyperlinks are identified and so on. I'm
20 just emphasizing the portion of the construction modify all
21 identified continuations to include state information, so
22 you can see Mr. Dunham says that that data is a placeholder
23 for data, the curly brace HREF stuff is a placeholder for
24 data that will be filled in, that's the modifying part,
25 that's the filling in part and Dr. Weissman is saying

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1 replace to insert values, so that's the part -- I'm sorry,
2 he's agreeing, he's not saying he's agreeing, but that his
3 understanding that it replace to insert values, that's the
4 modifying portion of the claim.

5 Q. Slide 202, let's talk a little bit more about state
6 information. What testimony did you review about state
7 information?

8 A. This is additional testimony from Mr. Dunham and
9 Mr. Sood and in these cases they're talking about pledge ID.
10 We talked about deal permalinks, we talked about deal ID and
11 now they're explaining what pledge IDs are. A pledge ID,
12 Mr. Dunham said my understanding is a pledge ID specifies a
13 specific option for a deal. Then he says pledge ID
14 specifies which option for that deal the user is interested
15 in purchasing such as the My Three Treasures pendant.

16 Q. What do you see on the right-hand side, Dr. Schmidt?

17 A. Mr. Sood is saying that Groupon tracks the deal name
18 on the checkout page by using a pledge ID associated with a
19 URL.

20 Q. Is pledge ID an example of state information?

21 A. Pledge ID is another example of state information
22 that is included in the continuation we have been looking
23 at.

24 Q. Looking at slide 203. Is it your opinion that
25 Groupon performs the recursively embedding step of claim 1?

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1 A. Yes, that's correct.

2 Q. Let's go to the communicating step. Looking at slide
3 205, what part of this claim element are you analyzing here?

4 A. So this is the final element and I'm looking at the
5 first portion highlighted in yellow which is communicating a
6 response including the continuations and embedded state
7 information.

8 Q. What are you showing here at the bottom of the slide
9 or I guess on slide 205?

10 A. So if you take a look at exhibit PX-176, this is that
11 Groupon shared layout service document, this is showing some
12 visualizations of elements in their service architecture.
13 We talked about the layout service earlier, that's a service
14 that will return Mustache templates that include these
15 continuations, and we saw how other parts of Groupon's code
16 will then recursively embed state information into those
17 identified continuations. What we see here in this picture
18 from their documentation, this HTML and other data is sent
19 back to the client's browser, to the client, and that
20 information in the HTML file is then communicated to the
21 client, it's coming back from the server architecture on the
22 right back to the client on the left.

23 Q. Can you tell us what exhibit shows kind of what the
24 person would see on their computer when it comes back?

25 A. Yes. So what's happening there, we look at exhibit

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1 PX-964 which has the page that lays out the purchase cluster
2 and you can see that there is the buy button there with the
3 option that the person can select, the user can select, and
4 if we were to peek behind the buy button or if we were to
5 look at the flow of the traffic back and forth using the
6 Chrome Dev tools or the HTTP archive stuff I talked about,
7 we would be able to see that the continuation and embedded
8 state information has been communicated in the response, so
9 this is what came back from the server, back to the client
10 and that state information about collection, custom, My
11 Three Treasures, which is the deal permalink, and the pledge
12 ID, all that's been communicated back to the client.

13 Q. Now, looking at slide 206, what portion of the claim
14 element are you addressing here?

15 A. So this is the final part of the final claim of claim
16 51, and this is wherein the continuations enable another
17 service request and one of the continuations must be invoked
18 to continue the conversation.

19 Q. So now looking at slide 206 here, this diagram looks
20 familiar. What are you showing here?

21 A. This is what we start out talking about a while back
22 about a conversation. And so just to kind of orient you
23 where we are, at this particular point in the conversation,
24 what I have been showing you on the back end identifying and
25 recursively embedded portion from the Groupon servers, what

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1 will come back will be that screen in the middle which
2 contains the purchase cluster that has the buy button. And
3 that includes a continuation, that's the continuation, and
4 if the user selects that continuation, or invokes that
5 continuation, then the conversation will continue, and
6 another service request will be sent from the client back to
7 Groupon's servers this time in order to be able to attempt
8 to purchase that particular good.

9 Q. Now, looking at slide 207, is it your opinion that
10 Groupon performs the communicating a response element of
11 claim 51?

12 A. Yes, that's correct.

13 Q. Now, I would like to stay on this slide for just a
14 second and ask you, does claim 51 require identifying all
15 links in a web page?

16 A. No, it does not.

17 Q. What does it require?

18 A. As you can see here, it requires identifying all
19 continuations in an output from a service or from said
20 service.

21 Q. Is that what you analyzed?

22 A. That is what I analyzed, that's correct.

23 Q. Let's go on to slide 208 here. So what are you
24 showing here with claim 54?

25 A. So this shows that claim 54 depends on claim 51,

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1 that's the highlighted portion, the method claim 51 which
2 again means that in order for claim 54 to be infringed,
3 claim 51 must be infringed.

4 Q. Let's look at claim 54 on slide 209 and then let's
5 look at the evidence on slide 210. So what are you showing
6 here with the client on the left and the Groupon servers on
7 the right?

8 A. So what I'm showing here is that the step, I'm
9 showing the step of dynamically downloading computer program
10 code for the client to perform said embedding step, the
11 embedding step we talked about before in response to said
12 step of communicating output to the client.

13 Remember earlier when we looked at My Three
14 Treasures pendant, that was a single option deal. Now we're
15 looking at a multi-option deal and this particular deal
16 happens to be shown on the client. It's a deal for getting
17 45 percent off on pizza, or some percentage off on pizza at
18 Jet's Pizza. And that's -- and that particular screen can
19 be used to generate a request and you can see that the
20 request is shown in PX-965. If you squint really hard it
21 includes the information that says Jet's Pizza, Nashville.

22 Q. Let's talk about dynamically downloading part. What
23 are you showing below in PX-963 and then PX-1411?

24 A. So 963 and 1411 are showing the HTML and other data
25 that will be downloaded from Groupon's servers as a result

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1 of the processing that they do in order to provide a
2 purchase cluster with three options, not one, so this is
3 what's called a multi-option deal.

4 Q. What are you showing in PX-1229?

5 A. So because it's a multi-option deal, the Groupon
6 servers also send down some program code, in this code it's
7 Java script program code, and this Java script program code
8 will be used to perform the embedding step.

9 Q. Let's look at slide 211 here. So there is a couple
10 of steps in this slide, so could you just set up what we're
11 looking at here on slide 211 with reference to PX-963?

12 A. Because this is a little hard to see that purchase
13 cluster in the screen in the previous slide, I have kind of
14 zoomed in on it, you can see the purchase cluster which is
15 the part with the buy button and the various options and I'm
16 going to use this to demonstrate how the downloaded computer
17 programing code is used by the client to perform the
18 embedding step.

19 Q. What do we see here on slide 212?

20 A. On slide 212, the user, the client has selected one
21 of the options, this is to get a pizza deal at a Nashville
22 location. And what will happen there is that the downloaded
23 program computer code that the client now has will be used
24 to perform the embedding system and in particular what it's
25 going to do is it's going to put a pledge ID that ends in

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1 507 into the continuation that's associated with that buy
2 button if that's the option that's selected.

3 Q. So then what happens in slide 213 here?

4 A. So this is showing the user selecting a different
5 option. This time they're selecting the Green Hills
6 location for Jet's Pizza. And, once again, computer code
7 that has been dynamically download will be used by the
8 client to perform the embedding step. In this case, it will
9 put a different pledge ID into that continuation, this one
10 ending in 509.

11 And I kind of showed the other earlier pledge
12 off to the side just so you could see it ended in 507 which
13 is different from 509. So it's a different embedding of
14 state information for that option.

15 Q. And looking at slide 214. What do we see here with
16 the third option?

17 A. So this is the third and final way of doing things.
18 It's more or less the same as before except this time the
19 user is selecting the Antioch Jets Pizza location. And when
20 they do that, the downloaded computer code will be used by
21 the client to perform the embedding step in this case
22 putting a different pledge ID that ends in 511, rather than
23 509 or 507, as was the case before.

24 Q. So now looking at slide 215. Is it your opinion that
25 Groupon performs claim 54 of the '601 patent?

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1 A. That's correct.

2 Q. So now I would like to talk a little bit about
3 Groupon's mobile apps. Can you remind us of your opinions
4 with respect to Groupon mobile apps?

5 A. Yes. My opinion is that Groupon's mobile apps
6 infringe claims 51 and 54 of the '601 patent.

7 Q. So let's start again with the preamble of claim 51.
8 And looking at slide 218, what are you showing here?

9 A. So this is essentially showing that the mobile apps
10 version -- see we have a mobile device on the left-hand side
11 this time -- preserves state information in a conversation
12 in essentially the same way as Groupon's website version we
13 just looked at.

14 There are just a couple differences for this
15 example:

16 No. 1, it's a mobile device, not a desktop
17 browser.

18 No. 2, the example we're using is actually a,
19 it's a getaway at a culinary resort in North Carolina as
20 opposed to picking the My Three Treasures pendant.

21 And you can also see it's a multi-option deal.
22 So we have multiple options for different packages to go to
23 that getaway.

24 Q. So in your opinion, does Groupon's mobile app perform
25 the preamble of claim 51?

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1 A. Yes, that's correct.

2 Q. So let's move on to the receiving step. So then
3 looking at slide 221. What are you showing here for the
4 receiving step?

5 A. So this is essentially demonstrating how the mobile
6 client will send a request. That request includes state
7 information. In this particular case, it's a little hard to
8 see. But if you look carefully, you will see the underlying
9 portion on the right-hand side says deal ID equals GA --
10 which stand for getaway -- -the-farm-kitchen-2. So that is
11 the particular identifier that is unique for that particular
12 deal. That is the request that is being sent over to
13 Groupon's servers, including that deal state information.

14 Q. And what exhibit are you referring to here?

15 A. So this is Exhibit 970.

16 Q. So looking at slide 222. Is it your opinion that
17 Groupon's mobile apps perform the receiving step of claim
18 51?

19 A. Yes, that's correct.

20 Q. Let's move on to the identifying step. So looking at
21 slide 224, can you remind us of the Court's construction of
22 "continuations?"

23 A. Sure. So the element we're dealing with here is
24 "identifying all continuations in an output from said
25 service."

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1 And "continuations" has been construed as, "a
2 new request which a client may send to a server, such as,
3 for example, a hyperlink."

4 Q. And what are you showing here on slide 224 with that
5 construction in mind?

6 A. So this is showing how for the mobile apps version,
7 Groupon's servers send down Javascript Object Notation or
8 JSON data which contains information about the deal and the
9 options for a deal. And that is the information that goes
10 from the servers to the client. Remember, before, we were
11 looking at HTML? That is what it does for the desktop
12 version. For the mobile version, however, JSON is the
13 information that is sent out.

14 Q. And what are the continuations here on slide 224?

15 A. So these continuations correspond to the various
16 options that a user could select. So we would have option 1
17 which would be for one type of getaway. Option 2 for a
18 different type of getaway at that culinary resort. Option 3
19 is a different option at that getaway resort.

20 Q. So we're now looking a slide 225. What are you
21 showing here with the kind of human visualization on the
22 left and the computer language on the right?

23 A. So what is happening on the right-hand side is the
24 code that is supplied by Groupon as part of their mobile
25 app is looking at that output that is coming down from the

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1 shared Layout Service and for Groupon's servers, and it is
2 identifying the continuations in that output.

3 And, in particular, you can see it's looking at
4 those options that we just saw. There were three options.
5 The code is able to identify these are the options that
6 correspond to this particular output from that service.

7 Q. So looking at slide 226. Is it your opinion that
8 Groupon's mobile apps perform the identifying step of claim
9 51 of the '601 patent?

10 A. That is correct.

11 Q. Now, let's look at the "recursively embedding" step.
12 So can you tell us what we're seeing here on slide 228? But
13 maybe first I'll ask you, can you remind us of the claim
14 term we're dealing with in the Court's construction of
15 "recursively embedding?"

16 A. Sure. So this claim has been defined or construed
17 as, "applying a process one or more times to each identified
18 continuation to modify all identified continuations to
19 include state information."

20 Q. So let's break this down a little bit. So looking at
21 slide 228, what are you showing with the various options
22 there?

23 A. Sure. So from Exhibits 969 and 970, on the
24 right-hand side, I'm showing the various options that have
25 been sent down to the mobile app, the client, from the

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1 Groupon servers. And these correspond to the identified
2 continuations.

3 Q. And --

4 A. And so -- sorry.

5 Q. Please go ahead.

6 A. And so the user on the client, on the phone, will be
7 given the opportunity to select which option or options that
8 they would like to choose. Let's say they choose the second
9 option. And so what happens when they do that is the
10 Groupon mobile app code will apply a process to that
11 identified continuation to modify it in order to yield what
12 we see in the upper left-hand portion, which is going to be
13 the modified continuation that will be used momentarily to
14 send a response. It will be used to send a response back
15 because of the conversation.

16 Q. So what do we see as the continuation with embedded
17 state information?

18 A. So the continuation, which is again the left-hand
19 part up in the upper box, has embedded state information
20 in it. You can see, for example, that it has a piece of
21 state information that says deal option ID. That's the part
22 that is highlighted in yellow. And underlined in red in
23 the middle, deal option ID. And that includes a number,
24 54247467. And you can see that that number is state
25 information that is shown in the option on the right-hand

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1 side. On the right-hand side is referred to as pledge ID.

2 On the left-hand side, after it has been modified, it's

3 now called a deal option ID.

4 Q. So looking at slide 229, is it your opinion that
5 Groupon's mobile apps perform the "recursively embedding"
6 step?

7 A. Yes, that's correct.

8 Q. So now let's look at the communicating step. Looking
9 at slide 231, what are you shown here with reference to
10 PX-969?

11 A. So this slide, which I will explain in a second, is
12 showing how Groupon performs the element "communicating a
13 response including the continuations and embedded state
14 information, wherein the continuations enable another
15 service request and one of the continuations must be invoked
16 to continue the conversation."

17 So if you recall in the previous slide, I showed
18 you how the embedding part was done by Groupon's mobile app
19 code, but that is done inside the application. In order for
20 that to actually be displayed to the user so they can do
21 something about it, that code that is written in there has
22 to be sent from Groupon's app running on the mobile device
23 to another portion of the mobile device which will be the
24 display server, display manager. And to do that, Groupon
25 communicates this information through the local device

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1 operating system such as iOS or Android. And that
2 communication is then used to display the user interface
3 that we see on the right-hand side. And that user interface
4 we see on the right-hand side will allow the user to invoke
5 one of the continuations, in other words, one of those
6 options in order to continue the conversation.

7 Q. So looking at slide 232. Is it your opinion that
8 Groupon's mobile apps perform the last element of claim 51
9 of the '601 patent?

10 A. Yes, that's correct.

11 Q. So now let's talk about claim 54 again. And if we
12 look at slide 234. Can you show us what your -- can you
13 tell us what you are shown here on slide 234 with the
14 "dynamically downloading?"

15 A. So this is the part dealing with further comprising
16 the step of dynamically downloading computer code to the
17 client to perform said embedding step.

18 What this shows is the Javascript Object
19 Notation computer program code which is what is downloaded
20 from the server to the mobile app client is then used by
21 that client in order to perform the embedding step, what we
22 just looked at.

23 Q. And what exhibit did you look at to confirm that
24 opinion?

25 A. This is PX-970.

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1 Q. So is it your opinion that Groupon's mobile
2 applications perform claim 54 of the '601 patent?

3 A. That's correct.

4 Q. So now looking at slide 236. Can you tell us what
5 your opinions are regarding past versions of Groupon's
6 website and mobile apps?

7 A. Yes. So it is my opinion Groupon's website has
8 infringed claims 51 and 54 of the '601 patent since November
9 2008.

10 Groupon's iOS mobile app has infringed claims 51
11 and 54 of the '601 patent since March 2010.

12 And, likewise, Groupon's Android mobile app has
13 infringed claims 51 and 54 of the '601 patent since July
14 2010.

15 Q. And looking at the left-hand side of the materials
16 reviewed, can you tell us what you reviewed, first?

17 A. Yes. So I reviewed past versions of Groupon's
18 website and mobile apps as shown in a number of exhibits.

19 Q. And those are PX-1022, PX-1034, PX-1025, PX-1036, and
20 PX-1037?

21 A. That's correct.

22 MR. OUSSAYEF: Your Honor, I offer those
23 exhibits.

24 MR. HADDEN: No objection.

25 THE COURT: Those are admitted.

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1 (Above-referenced exhibits admitted in evidence.)

2 BY MR. OUSSAYEF:

3 Q. And then next I see you reviewed Groupon's past
4 source code. Can you tell us a little bit about that?

5 A. Yes. So as I mentioned earlier for the other
6 patents, I was able to look back at Groupon's source code
7 repository, roll back, look at different versions, see how
8 those versions corresponded to the other analysis of website
9 and app photos and images and so on. And this was done
10 through Groupon's own source code computer.

11 Q. And that includes PX-1495, 1496, 1497, 1502, 1503,
12 1519, 1529, 1530, 1531, 1537, 1542 and 1543?

13 A. That's correct.

14 MR. OUSSAYEF: Your Honor, I offer those
15 exhibits.

16 MR. HADDEN: No objection.

17 THE COURT: They are admitted.

18 A. I believe also PX-1112.

19 MR. OUSSAYEF: Yes, and I offer that exhibit as
20 well.

21 THE COURT: Any objection?

22 MR. HADDEN: No objection.

23 THE COURT: That one is admitted, too.

24 (Above-referenced exhibits admitted in evidence.)

25 BY MR. OUSSAYEF:

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1 Q. Now, did you review any testimony from Groupon,
2 personally?

3 A. Yes. I reviewed testimony from Mr. Sood, Mr. Dunham,
4 and Mr. Krems.

5 Q. Did you review any Groupon technical documents to
6 support your opinions about past infringement?

7 A. Yes, I reviewed a number of Groupon technical
8 documents, including PX-625, PX-1027, and PX-1038.

9 MR. OUSSAYEF: Your Honor I offer those exhibits
10 as well.

11 MR. HADDEN: No objection.

12 THE COURT: They're admitted.

13 (Above-referenced exhibits admitted in evidence.)

14 BY MR. OUSSAYEF:

15 Q. So now -- oh, I'm sorry. There is one more thing,
16 too. Did you review Groupon's statements about past
17 versions of its mobile application and website as well?

18 A. Yes, I did. That was exhibit PX-4967, and I reviewed
19 that as well.

20 MR. OUSSAYEF: And that has been previously
21 offered.

22 BY MR. OUSSAYEF:

23 Q. So I'll move on to slide 237. So can you tell us a
24 little bit about how you analyzed extent of use for the '601
25 patent?

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1 A. Sure. So when we walked through that conversation
2 slide awhile back, it showed the various steps involved IN
3 selecting, choosing a particular application, selecting a
4 particular deal, finding information about a deal, selecting
5 deal options, deciding to buy, clicking the buy button,
6 being given a chance to purchase the deal and so on and so
7 forth.

8 So there is roughly eight steps or so in a
9 typical successful transaction from start to finish. And to
10 be conservative, I assumed that at least one of those steps
11 involve state information that is embedded into a hyperlink
12 or continuation as we described. And so my conservative
13 analysis was 1/8, which is about 12.5 percent.

14 Q. What step from going from the launch pad until the
15 order did we just go through in your analysis?

16 A. So we went through a couple of steps, but what we
17 were doing there was looking at selecting a particular deal
18 to find information about, that was one of the things, and
19 being able to get detailed information about that deal.

20 We also used purchasing or clicking the "buy"
21 button on the deal. That was another step that I showed.

22 And then being able to get back the purchase
23 order information for completing the purchase.

24 Q. Thank you, Dr. Schmidt. So now let's move on to the
25 subject of the '346 patent. Before we go into your

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1 analysis, can you remind us of your opinion with respect to
2 the '346 patent?

3 A. Yes. It's my opinion that Groupon infringes claims 1
4 and 5 of the '346 patent.

5 Q. So looking at slide 239. I see you are going to take
6 us through the claim elements again?

7 A. Yes, that's correct.

8 Q. And then on slide 240, we see claim elements color
9 coded?

10 A. Yes.

11 Q. So let's deal with the first element, the preamble of
12 the '346 patent.

13 So, first of all, looking on slide 242, did the
14 Court construe any terms in the preamble of the '346 patent?

15 A. Yes. There are a number of terms construed here:
16 user authentication, single-sign-on operations, and so
17 forth. And I will describe them as we go through the
18 material.

19 Q. So looking at slide 243. What portion of the
20 preamble are you addressing on this slide?

21 A. So this is the very first part of the preamble which
22 states: a method for managing user authentication.

23 Q. And what are you showing here with the image of
24 Groupon's website on the right and then the testimony of Mr.
25 Dunham on the left?

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1 A. So Mr. Dunham is asked a question: Is it fair to say
2 that Facebook login, Google login are ways of authenticating
3 a user?

4 And he agrees with that.

5 Then to the right-hand side in Exhibit 964, I'm
6 showing an example of a screen that Groupon shows to users,
7 in this particular case, it's for the desktop website, that
8 allows the users to log in or sign up using Google or
9 Facebook credentials, to log in to Groupon using the
10 credentials that are provided by Google or Facebook to
11 authenticate the user.

12 Q. So now looking at slide 244. What portion of the
13 claim element are you addressing here? Or what portion, I
14 should say.

15 A. So this is the part highlighted in yellow: "a first
16 system and second system interact within a federated
17 computer environment and at least one of the first system
18 and second system comprising a processor."

19 Q. And what is the Court's construction of "federated
20 computing environment" which appears in what you are
21 analyzing?

22 A. So this is a long construction, so I'll try to break
23 it down and read it to you carefully.

24 It's a "federated computer environment" is
25 defined as "a set of distinct entities, such as enterprises,

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1 organizations, institutions, et cetera, that cooperate to
2 provide a single-sign-on, ease-of-use experience to a user,
3 wherein the enterprises need not have a direct,
4 pre-established, relationship defining how and what
5 information to transfer about a user."

6 Q. So tell us what we're seeing with the map of the
7 United States and the federated computing environment there.

8 A. So this is demonstrating how we have servers provided
9 by Groupon which might be in one location. That is what
10 we're calling the second system, and that would about color
11 coded in green -- green for Groupon. And then we also show
12 first system computers which could be provided by Google or
13 Facebook or somewhere else.

14 So this is illustrating how these different
15 systems, the first system and the second system, interacting
16 within this federated computer environment. And, of course,
17 this is also showing that these are computers, so naturally
18 they comprise a processor, at least one, probably more.

19 Q. So now looking at slide 245. In case there is any
20 doubt, are Facebook and Facebook different entities than
21 Groupon?

22 A. So Mr. Breen, who is Groupon's Senior Engineering
23 Manager, agrees that Google and Facebook are different
24 entities than Groupon.

25 Q. And do those entities cooperate in order to provide a

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1 single-sign-on operation?

2 A. Through the technology we're about to look at, yes.

3 Q. So now let's look at slide 246 here. What portion of
4 the claim element are you addressing here?

5 A. So now we're talking about supporting single-sign-on
6 operations in order to provide access to protected
7 resources.

8 Q. So what is the Court's construction for "protected
9 resources?"

10 A. So this is another long instruction. I'll walk
11 through it carefully.

12 "A protected resource is defined as, an
13 application, an object, a document, a page, a file,
14 executable code, or other computational resource,
15 communication-type resource, et cetera, identified by a
16 Uniform Resource Locator (URL) or, more generally, a Uniform
17 Resource Identifier (URI) that can only be accessed by an
18 authenticated and/or authorized user."

19 Q. So look at the bottom of slide 246, can you tell us
20 what you have shown here to kind of explain that in a way
21 that is easier to understand?

22 A. Sure. So we're looking at exhibit PX-964. On the
23 right-hand side, we see some examples of protected resources
24 that Groupon offers through their service. So this would
25 include things like purchases. We'll see in a moment you

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1 need to be logged in or signed in to purchase deal.

2 Other things that are protected, not just
3 anybody can access unless they're authenticated, would be
4 the profile information about the user, particular Groupons
5 that a user might have in their possession. And so I have a
6 little wall, a little brick wall there showing if a user
7 attempts to check out of their cart and they haven't signed
8 in yet, they won't be able to get access to those protected
9 resources.

10 Q. So now looking at slide 247, what does Mr. Dunham say
11 about protected resources?

12 A. He's saying a couple of things. First he's agreeing
13 that on Groupon's website, users need to be registered to
14 purchase Groupon deals. And then he's giving some examples
15 of portions of Groupon's website that are only available to
16 logged in users and these include the My Profile page I just
17 mentioned, My Groupons page and so on.

18 Q. Looking on slide 248, is it your opinion that Groupon
19 performs the preamble of claim 1 of the '346 patent?

20 A. Yes, that's correct.

21 Q. Now, let's talk about the triggering element. Did
22 the Court construe any language in the triggering element of
23 the '346 patent?

24 A. Yes. The term we just discussed protected resources
25 is construed as well as a term single-sign-on operations.

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1 Q. Looking at slide 251, what portion of the claim
2 element are you dealing with here?

3 A. Here we're dealing with the first portion of this
4 claim element which says triggering a single-sign-on
5 operation on behalf of the user in order to obtain access to
6 a protected resource that is hosted by the second system.

7 Q. How has the Court construed single-sign-on
8 operations?

9 A. This is construed as an authentication process
10 whereby the user is subsequently not required to perform
11 another authentication operation during a particular user
12 session.

13 Q. What are you showing here with the arrows jumping
14 over the brick wall here?

15 A. This is showing that the user is going to be required
16 to log in using the screen and other code that Groupon
17 provides in order to do that login in order to trigger that
18 login, and once that happens, once they're successfully
19 signed in, then they'll be able to access the protected
20 resources without having to perform other authentication
21 operations up to the point where they log out.

22 Q. Now, looking at slide 252, what does Mr. Dunham say
23 about the triggering step?

24 A. He's agreeing that if a user tries to purchase a deal
25 but they're not logged in, that will trigger a login

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1 process.

2 Q. And then looking at slide 243, is it Groupon who
3 designed this website to have that triggering step?

4 A. Yes, Mr. Dunham is agreeing that Groupon designed its
5 website because users have to be logged in to purchase
6 deals.

7 Q. Now, looking at the slide 254 here, what are you
8 showing here with the human language on the left and then
9 the computer language on the right?

10 A. So let's start with the human language on the left.
11 This is showing a screen that Groupon will provide in this
12 case to a desktop browsers or a laptop browser and one of
13 the things you see here is highlighted in red says log in
14 with Google. This is I believe the single-sign-off or sign
15 in button. And if the user were to select that button, then
16 the code that's shown on the right-hand side which is code
17 that Groupon provides, it's downloaded into the browser from
18 Groupon, this code then triggers the single-sign-on. If you
19 take a look, you can see that this is coming out as source
20 code that is provided by Groupon, and there is a click hand,
21 you see dot click, that means that's the code that will be
22 run to trigger the login.

23 Q. And you're referring to PX-964 on the left and
24 PX-1192 on the right?

25 A. That's correct, yes.

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1 Q. So we're referring to logging in using Google
2 credentials, let's talk about logging in using Facebook
3 credentials. What do we see here on slide 255?

4 A. So in the left-hand side is Exhibit 964, we see once
5 again there is a chance to login with Facebook, and if the
6 user selects that particular way to do the single-sign-on,
7 then you take a look in the right-hand side this is source
8 code provided by Groupon, and that source code when run will
9 trigger the single-sign-on operation and so you can see go
10 ahead and start the social client login using Facebook as
11 the way to provide the credentials.

12 Q. So looking at slide 256, is it your opinion that
13 Groupon performs the trigger steps of claim 1 of the '346
14 patent?

15 A. That's correct, it's performing that, it's triggering
16 that single-sign-on operation on behalf of the user, the
17 code that we saw is triggering that on behalf of the user.

18 Q. Let's go to the receiving step. So we have a couple
19 of slides here on slide 258 with a couple of builds which
20 will build on each slide. I would like to start with the
21 setup here. Can you tell us what we're seeing here?

22 A. So the claim element is receiving from the first
23 system at the second system an identifier associated with
24 the user. So I'm just kind of showing, just to remind
25 everyone what the first system or first systems are, that

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1 would be things like Google or Facebook, those are the
2 so-called identity providers and I'm showing the second
3 system which is Groupon servers which are the so-called
4 service providers.

5 Q. Let's look at the first step here. What are you
6 showing here on in this first step on slide 259?

7 A. So assume a client tries to access a protected
8 resource, they're trying to purchase a deal, they're trying
9 to access their profile. What I'm showing here is that
10 Groupon will go ahead and send them back that login screen
11 that we just looked at, that sign in screen that has various
12 ways to sign in, and what you can see there is two of the
13 ways is login with Google, login with Facebook.

14 Q. What happens in this next step we see here in slide
15 260?

16 A. So, assuming the user selects one of the social sign
17 in buttons, at that point the code that Groupon provides
18 will trigger that login process, single-sign-on process, and
19 that will involve ultimately a password and a user name to
20 be sent over to the first system.

21 Q. What happens in this next step on slide 261?

22 A. So the first system will then send back something
23 called a token which travels back through the user's client
24 computer software and then is redirected to go back to the
25 Groupon second system, the Groupon servers.

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1 Q. Is that token something we saw when Dr. Hinton was on
2 the stand?

3 A. Yes, exactly.

4 Q. And then let's look at this next step here on 262.

5 A. So at this point, Groupon code running on the second
6 server would use that token in order to send a request back
7 to the first system, back to Google, back to Facebook, back
8 to whoever the identity provider is that's involved here.

9 Q. What happens in slide 263?

10 A. So, in response to that request that comes from
11 Groupon with that token that a then indicates the user, then
12 whoever the identity provider is, be it Facebook or Google,
13 will send back additional information about the user, such
14 as their email address, their name and so on, and that comes
15 back from Groupon from the second server.

16 Q. Looking at slide 264, what portion of the claim
17 element are you addressing here?

18 A. The part about an identifier associated with a user.

19 Q. What does Mr. Dunham say about that identifier?

20 A. He says that it's his understanding that uniquely
21 identifying the user in Groupon's database is the user's
22 email address that performs the purpose of uniquely
23 identifying the user.

24 Q. Looking at slide 265, is it your opinion that Groupon
25 performs the receiving element of claim 1 of the '346

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1 patent?

2 A. Yes, that's correct.

3 Q. Let's look at the next element, the creating element.
4 So on slide 267, what portion of the claim element are you
5 addressing here?

6 A. So this is the part dealing with creating a user
7 account for the user at the second system.

8 Q. And you're referring to PX-1005. What are you
9 showing in that document?

10 A. This is a document where Groupon explains how an
11 account is created on a Groupon server for the use if the
12 user is not present yet on the Groupon server. Let me read
13 it, it says a request is fired checking to see if the Google
14 user is present on the Groupon server. And if they're not,
15 an additional request is executed creating an account on the
16 Groupon server.

17 Q. And then looking at slide 268, what portion of the
18 claim element are you addressing here?

19 A. This is the part that deals with based at least in
20 part on the received identifier associated with the user.

21 Q. What are you showing here in PX-466?

22 A. This is a quote from another one of Groupon's
23 documents about the user service, and it basically says that
24 the user's email address is the primary identifier for the
25 user account. The specific quote is the user's service is

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1 the system of record for the email address associated with
2 an account since possession of that email account is the
3 primary way Groupon verifies identity.

4 Q. Looking at slide 269, what portion of the claim
5 element are you addressing here?

6 A. This is the final part highlighted in yellow, and in
7 order to make sense of it, you have to first put in the
8 phrase creating a user account, put that in the back of your
9 head. Then it says after triggering the single-sign-on
10 operation, but before generating at the second system, a
11 response for accessing the protected resource, wherein the
12 created user account supports single-sign-on operations
13 between the first system and the second system on behalf of
14 the user.

15 Q. So there is a triggering step and a creating step.
16 What do we see about those two steps on slide 269 here?

17 A. So in exhibit PX-964, we can see what's happening
18 here is that the user account is created at step two which
19 is after the triggering step, so step two is after the
20 triggering step, and as we'll see in the next build it's
21 before.

22 Q. Let's look at the next build. What do we see here?

23 A. After the user -- I'm sorry, after the user account
24 is created, the user of the second system, then after that
25 is created, at that point then a response is generated at

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1 the second system at Groupon to allow the client to access
2 the protected resource, that's generating, this allows the
3 client to access whatever resource they were trying to
4 obtain earlier.

5 Q. So it's creating it after triggering but before
6 generating?

7 A. Creating is after triggering but before generating,
8 yes.

9 Q. Looking at slide 271, is it your opinion that Groupon
10 performs the last element of claim 1 of the 364 patent?

11 A. Yes, that's correct.

12 THE COURT: Mr. Oussayef, I think I'm going to
13 stop you there just briefly. We'll give the jury a little
14 bit of a break. No talking about the case during the break.
15 We'll bring you back in a bit.

16 (Jury exited the courtroom at 10:37 a.m.)

17 THE COURT: We'll be in recess.

18 (A brief recess was taken)

19 THE COURT: Bring the jury back in.

20 (Jury entering the courtroom at 11:00 a.m.)

21 THE COURT: We are ready to continue.

22 Mr. Oussayef.

23 MR. OUSSAYEF: Thank you, Your Honor.

24 BY MR. OUSSAYEF:

25 Q. So, Dr. Schmidt, we were on slide 271. Is it your

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1 opinion that Groupon performs each element of claim 1 of the
2 '346 patent?

3 A. Yes, that's correct.

4 Q. Now, did you hear counsel for Groupon say during his
5 opening statement that Google and Facebook were responsible
6 for these elements of the claims?

7 A. Yes, I did.

8 Q. Now, does that make any sense to you?

9 A. No, it doesn't. As I showed in the code snippets,
10 the code that is provided by Groupon is what triggers the
11 single-sign-on operation.

12 Q. Let's take a look at the creating element here.
13 Would it make any sense for Google or Facebook to create a
14 Groupon user account?

15 A. No, it would not.

16 Q. Let's move on to claim 5 here. What is your opinion
17 about claim 5 of the '346 patent?

18 A. It's my opinion that Groupon infringes claim 5 of the
19 '346 patent.

20 Q. So looking at slide 273, what do we see here with
21 claim 5 and claim 1 side-by-side?

22 A. So, we're showing here is that claim 5 depends on
23 claim 1 as we talked about before.

24 Q. So looking on slide 274, let's deal with each claim
25 element in turn. So let's start with the first half of

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1 claim 5 of the '346 patent. And now looking on slide 276,
2 what are you showing here about the first part of claim 5?

3 A. So what I'm showing here is the first part of claim 5
4 is dealing with this sending of the token from the second
5 system over to the first system, or Groupon over to Facebook
6 or Google.

7 Q. And tell us what the first part of claim 5 is?

8 A. The first part of claim 5 is in response to a
9 determination at the second system that the second system
10 does not have sufficient user attribute information to
11 complete creation of a user account for the user of the
12 second system.

13 Q. And if we look on slide 277, what does Mr. -- I
14 guess, let me start with this. What part of the claim
15 element are you addressing here?

16 A. So I'm addressing the part that's in yellow which is
17 the part about in response to the determination at the
18 second system that the second system does not have
19 sufficient user attribute information to complete creation
20 of a user act for the user of the second system.

21 Q. Can you simplify that a little bit? What is that
22 referring to, what situation?

23 A. So as Mr. Dunham was testifying here, if the token
24 that Groupon receives from Google, once it's decrypted does
25 not have the user information that we need, then in that

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1 case the Groupon user service needs to make an API call to
2 Google.

3 Q. If we look on slide 278, what portion of the claim
4 element are you addressing here?

5 A. We're talking about the second portion which is
6 sending a request message from the second system to the
7 first system to retrieve user attribute information.

8 Q. And I see you have the same quote from Mr. Dunham.
9 What are you focusing in on here?

10 A. I'm focusing on the second half of his quote, the
11 first quote said if the token Groupon receives from Google
12 does not have the user information that we need, then in
13 that case the Groupon user service needs to make an API call
14 to Google.

15 Q. In looking at slide 279, did you review any source
16 code from Groupon that supports your opinion?

17 A. Yes, this is source code from exhibit PX-1188 and
18 what this code is showing is that Groupon is sending a
19 request to Google to retrieve user attribute information.
20 If you look down at the part at the bottom it says Google
21 colon colon API client dot get account data by access
22 tokens, it says tokens results, access token, that's taking
23 the access token that was received from Google in this case
24 and using it in order to be able to get account data or get
25 the user's email address or account data, that's code that

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1 we're seeing that Groupon writes.

2 Q. Now, looking at slide 280, we were referring to
3 Groupon's login using Google credentials. Let's talk about
4 Groupon's login using Facebook credentials. What part of
5 the element are we going back to here?

6 A. This is in response to a determination at the second
7 system that the second system does not have sufficient user
8 attribute information to complete creation of a user account
9 for the user of the second system.

10 Q. What does Mr. Dunham say about that part?

11 A. So he's asked if the token that Groupon received from
12 Facebook does not have enough information to uniquely
13 identify the user, is that fair, and he says it cannot be
14 used to identify that user.

15 Q. And then looking at slide 281, what part of the claim
16 element are you addressing here?

17 A. Here we're talking about the sending a request
18 message from the second system to the first system to
19 retrieve user attribute information.

20 Q. What part of Mr. Dunham's testimony are you referring
21 to here?

22 A. This is the part where he says, it, which is the
23 token, is used to provide access to query Facebook for
24 information about that user. And then he's asked and the
25 way in which Groupon queries Facebook for information about

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1 the user is call Facebook graph API about the token, he
2 agrees with that, and says that's correct.

3 Q. Looking at slide 282, did you review any source code
4 that supported your opinion?

5 A. Yes. This is source code that comes from exhibit
6 PX-1211. And as you can see, this is Groupon code, this is
7 code that Groupon wrote, and it's using the Facebook API
8 client to send a request to Facebook to retrieve user
9 attribute information.

10 Q. Looking at slide 283, is it your opinion that Groupon
11 performs the preamble or the first part of claim 5 of the
12 '346 patent?

13 A. Yes, that's correct.

14 Q. Let's look at the second part of claim 5 of the '346
15 patent. Now, looking at slide 285, what are you showing
16 here?

17 A. So this is the final part of that claim element.
18 It's receiving at the second system from the first system a
19 response message that contains user attribute information
20 that is employed by the second system to complete creation
21 of a user account for the user at the second system.

22 Q. Now, looking at slide 286, what does Mr. Breen say
23 about this claim element?

24 A. Mr. Breen is agreeing that or answering that Google
25 returns information from the Google account, and contained

Schmidt - direct

1 in that information is the Google user ID, their email
2 address, and the name of the user.

3 Q. So now let's look at slide 287. What does Mr. Breen
4 say about Facebook credentials?

5 A. Mr. Breen is agreeing that Facebook returns the
6 Facebook user ID, email and name.

7 Q. In your opinion does Groupon perform the second part
8 of claim 5 of the '346 patent?

9 A. Yes, that's correct.

10 Q. So now let's talk about Groupon's mobile apps. Can
11 you tell us what your opinion is there?

12 A. Yes. It's my opinion that Groupon's mobile apps
13 infringe claims 1 and 5 of the '346 patent.

14 Q. So now let's look at slide 290. This looks similar
15 to an image we saw before, but can you explain what you're
16 showing here?

17 A. Sure. This is just showing the same process when the
18 client happens to be something that's running on a mobile
19 app, so either iPhone or Android, and the point of this
20 slide is the differences between the mobile app
21 implementations and the website version don't affect the
22 infringement of the '346 patent. The only real difference
23 there is that it's a mobile device and the screen therefore
24 looks a slight bit different when the user is prompted from
25 Groupon in order to be able to do social sign up or sign in

Schmidt - direct

1 using Facebook or Google.

2 Q. You're referring to PX-969?

3 A. That's correct.

4 Q. Now let's look at analysis of the past website, past
5 mobile apps. Can you tell us what your opinion is regarding
6 those versions of Groupon's services?

7 A. Yes. So it's my opinion that Groupon's website and
8 mobile apps have infringed claims 1 and 5 of the '346 patent
9 through Facebook login since the middle of 2011. And
10 Groupon's website and mobile apps have infringed claims 1
11 and 5 of the '346 patent through the Google login since
12 2016.

13 Q. And did you review any materials to support your
14 opinion about Groupon's past infringement?

15 A. Yes, I looked at the past version of Groupon's
16 website and mobile apps.

17 Q. And that would be PX-993?

18 A. That's correct.

19 MR. OUSSAYEF: Your Honor, I offer PX-993.

20 MR. HADDEN: No objection.

21 THE COURT: It's admitted.

22 BY MR. OUSSAYEF:

23 Q. Did you review any past source code?

24 A. Yes. I reviewed Groupon's past source code that was
25 available on their source code computer.

Schmidt - direct

1 Q. That would be PX-1492, PX-1504, 1505, 1506, 1509, and
2 1514, is that right?

3 A. As well as 1112.

4 Q. As well as 1112.

5 MR. OUSSAYEF: Your Honor, I offer those
6 exhibits as well.

7 MR. HADDEN: No objection.

8 THE COURT: They're all admitted.

9 (Above-referenced exhibits admitted into evidence.)

10 BY MR. OUSSAYEF:

11 Q. Did you review any testimony of Groupon's engineers
12 and employees?

13 A. Yes, testimony from Mr. Dunham and Mr. Breen.

14 Q. And how about Groupon's past technical documents?

15 A. I reviewed Groupon's past technical documents,
16 including Exhibit PX-625.

17 MR. OUSSAYEF: Your Honor, I offer that exhibit.

18 MR. HADDEN: No objection.

19 THE COURT: It's admitted.

20 (Above-referenced exhibits admitted into evidence.)

21 BY MR. OUSSAYEF:

22 Q. And did you review Groupon's statements about past
23 versions of its services as well?

24 A. Yes, I looked at Exhibit PX-497.

25 MR. HADDEN: No objection.

Schmidt - direct

1 THE COURT: It's admitted.

2 (Above-referenced exhibits admitted into evidence.)

3 BY MR. OUSSAYEF:

4 Q. Now looking at slide 292. Can you tell us how you
5 analyzed Groupon's extended use of the '346 patent?

6 A. Sure. So Groupon gave us a spreadsheet that went
7 back many years back starting in 2007 going through I
8 believe May or beginning of May 2016, and it had a
9 compilation of the total accounts created per month. That's
10 what is shown on the left-hand side in Exhibit PX-46.

11 And then they also gave us a spreadsheet that
12 included the total registrations by month for the same time
13 frame. And that is PX-46 at the different sub-columns and
14 rows.

15 And so what I did is I took the total number of
16 accounts, whichever is what is shown on the left, and I took
17 the total social registrations, these were the number of
18 registrations that involve social sign-ins, we found through
19 analysis to involve social sign-ins versus creating a Google
20 account. And I divided the total social registrations by
21 the total accounts and came up with 14 percent.

22 Q. And what exhibits did you look at there?

23 A. That was PX-46.

24 MR. OUSSAYEF: Your Honor, I offer PX-46.

25 MR. HADDEN: No objection.

Schmidt - cross

1 THE COURT: It's admitted.

2 (PX-46 was admitted into evidence.)

3 MR. OUSSAYEF: And, Your Honor, to the extent
4 any of the previous exhibits were admitted conditionally
5 upon providing additional context, we offer those exhibits
6 as well, Your Honor.

7 THE COURT: Okay.

8 MR. HADDEN: I'm not sure what those are but I
9 don't object.

10 THE COURT: Okay. They're all admitted then.

11 (Above-referenced exhibits admitted into evidence.)

12 MR. OUSSAYEF: Thank you, Your Honor. And with
13 that, I have no further questions. Thank you, Dr. Schmidt.

14 THE COURT: Okay. Thank you. We'll have
15 cross-examination.

16 MR. HADDEN: May I approach, Your Honor?

17 THE COURT: You may did.

18 (Binders passed forward.)

19 CROSS-EXAMINATION

20 BY MR. HADDEN:

21 Q. I'm going to start, Dr. Schmidt, by discussing the
22 '601 patent.

23 A. Okay.

24 Q. So this is one of the slides that you discussed with
25 IBM's counsel; correct?

Schmidt - cross

1 A. That's correct.

2 Q. Right. And this relates to the first step of claim
3 51, receiving a service request including state information.
4 Is that right?

5 A. That's correct.

6 Q. And the service request with the state information
7 that you are talking about is the request from the user's
8 browser to the Groupon server; is that correct?

9 A. That's correct.

10 Q. And that is shown in the middle. That's this guy
11 right here, right?

12 A. Yes.

13 Q. Okay. And at the bottom of this diagram, we have
14 this kind of cartoonish picture from the Groupon
15 documentation; right?

16 A. That's correct.

17 Q. Okay. And what is shown here is the request coming
18 from the user's browser, right? And that would be this
19 request up here; right?

20 A. That's correct.

21 Q. Okay. And that ultimately goes to this Grout thing
22 which is basically kind of a routing load balancing; right?

23 A. That's my understanding.

24 Q. And then it would get to a program on Groupon which
25 they call an I Tier Application, right?

Schmidt - cross

1 A. That is correct.

2 Q. And this diagram says Homepage ITA, but for this
3 particular request, it would be the Dealpage ITA; right?

4 A. It could be implemented various ways. That is
5 possibly one way it would be implemented.

6 Q. I'm not asking how it could be done, I'm asking how
7 it is done. So at Groupon, if a user sent this request, it
8 would end up at a Dealpage ITA at Groupon; right?

9 A. I don't recall exactly what it was showing. But that
10 was something that was showing up as part of the service
11 oriented architecture that Groupon provides.

12 Q. Right. So let's step back. The service oriented
13 architecture, right, means that there are programs at
14 Groupon like these I Tier Applications that process requests
15 for web pages, and they call on other programs to provide
16 them data and other information they need; right?

17 A. That's, as Mr. Dunham testified in deposition, there
18 are various services that are used to carry out users
19 requests.

20 Q. Right. And that is what you are pointing to here as
21 these backend services, right?

22 A. There are many services shown there. We can see
23 there is a Routing Service, there is Backend Service, a
24 Layout Service, there is the Homepage ITA. That is a
25 service, too, in a service architecture.

Schmidt - cross

1 Q. Right. So we have this Dealpage ITA that receives
2 the user's request and creates the page that is going to be
3 sent back to the user; right?

4 A. I'm sorry. Ask the question again.

5 Q. Sure. This box in the middle on the diagram that you
6 put up in front of the jurors shows a Homepage ITA, but as
7 we discussed, in your example, it would actually be a
8 Dealpage ITA. That is a computer program running on a
9 server at Groupon; right?

10 A. There are many services running on servers at
11 Groupon. Yes, I agree.

12 Q. Sir, I'm asking about this specific one on the
13 diagram you put in front of the jury. Now, do you
14 understand or not that that is a program running on a
15 computer at Groupon?

16 A. The Homepage ITA is certainly a program that is
17 running on a computer at Groupon, yes.

18 Q. And the Dealpage ITA would also be a program that is
19 running on a server at Groupon; right?

20 A. That's not what that diagram is showing, but there is
21 undoubtedly a Dealpage ITA running in there somewhere.

22 Q. Okay. So it is your understanding that the Homepage
23 ITA is what is processing this request?

24 A. Well, I believe it was my testimony that there are a
25 number of services that are processing this. As you can see

Schmidt - cross

1 there, there is a Routing service, there is a Homepage ITA
2 service. The request can show up and be processed perhaps
3 initially. The process would be several places but it is
4 being processed at the Homepage ITA, among other things.

5 Q. So it's your testimony that this request that you
6 pointed out in your demonstrative is being processed by a
7 Homepage ITA. That is your understanding of Groupon's
8 backend infrastructure?

9 A. So the Homepage ITA is part of the service oriented
10 architecture that is processing that request.

11 Q. That wasn't my question, so let's be very clear.
12 This specific request that you are pointing to that you say
13 fulfills this element of the claim, it's your testimony that
14 that is being processed by the Homepage I Tier Application
15 at Groupon; is that your understanding?

16 A. The Homepage ITA --

17 Q. It's a yes or no question. Can you answer it,
18 please?

19 A. Yes, it's being processed by the Homepage ITA.

20 Q. Okay.

21 A. Along with other services that are part of the
22 service oriented architecture.

23 Q. And if you are wrong and that request is not
24 processed by the Homepage ITA, you don't have any evidence
25 that this element is met, do you?

Schmidt - cross

1 A. Again, as I testified, there is many services that
2 are being used here. And the Homepage ITA is a part of that
3 service oriented architecture that will process that
4 request. There are other things that will also process that
5 request, services that process that request as well.

6 Q. Let's go back. This isn't that complicated, right?
7 You get a request from the user. It comes to some program
8 at Groupon that is responsible for making the web page that
9 gets sent back; right?

10 A. There is various parts --

11 Q. Is that a yes or no? Can you answer that question?

12 A. There are various -- yes, there are various parts of
13 Groupon's service oriented architecture that will process
14 the request to produce a web page.

15 Q. Is it an I Tier Application that will create the web
16 page that gets sent back to the user? That's a yes or no
17 question.

18 A. The I Tier Application -- yes, the I Tier Application
19 produces various things. HTTP is part of it for the web
20 page. There are other data from other parts of the service
21 as well, just to be clear.

22 Q. That's the question. The question is very simple.
23 We have an arrow coming in with the request from the web
24 page. Ultimately, a web page is going to come back. Is
25 that web page created by this Homepage I Tier Application?

Schmidt - cross

1 Yes or no?

2 A. Portions of it are created by that, portions are
3 created by other parts. So it is created by the I Tier
4 Application along with other parts of other services that
5 creates parts of that page.

6 Q. Right, but ultimately the page that comes back is
7 what the Homepage ITA returns to the user? Yes or no.

8 A. No, not necessarily. No.

9 Q. Okay. So it's your testimony that there is stuff in
10 the web pages that comes back to the user that is not the
11 output of the Homepage ITA or the other like Dealpage ITA.
12 Is that your testimony?

13 A. When a web page comes back to a client, there is
14 multiple requests from the client that provide multiple
15 parts of that web page. Some parts of that will be coming
16 back from the Homepage ITA, but there is also other things
17 that are coming back such as images which are also part of
18 what is returned as part of the web page. We talked about
19 that when I talked about the '849 and '967 patents. Those
20 things come from other places.

21 Q. Okay.

22 A. That's what multiple service architecture means.

23 Q. Well, let's look at what this service oriented
24 architecture means here.

25 So the Homepage ITA receives the request from

Schmidt - cross

1 the user's browser, right?

2 A. It receives the request, yes.

3 Q. Okay. And then it sends out its own request, right?

4 Which are the async.parallel nodeJS. That is the request
5 sent from the Homepage ITA to these other backend services;
6 right? That is what the arrows represent, right?

7 A. It is representing that among other things, yes.

8 Q. Right. And you say one of these other backend
9 services is the Layout Service, right?

10 A. One of the other services is the Layout Service, yes.

11 Q. And your theory of infringement for this claim is
12 that the Layout Service receives this service request from
13 the user and specifically it includes this state information
14 which identifies this necklace, right?

15 A. I don't think that quite states my testimony
16 correctly.

17 Q. Well, you did say, and I thought it heard it, that
18 the service request, including the state information, is
19 received by the Layout Service. Okay? Is that your
20 testimony?

21 A. No. No.

22 Q. So does the Layout Service receive the service
23 request with the state information?

24 A. So the service request or the request that is sent
25 across there is going to be received by the Homepage ITA,

Schmidt - cross

1 and then as part of checking that out, other services in the
2 service oriented architecture will do their thing.

3 Q. That's not the question. The question is does the
4 Layout Service receive the service request that includes the
5 state information?

6 A. So --

7 Q. Yes or no.

8 A. That's not part of my testimony.

9 Q. Okay. So do you have an opinion? Does it or doesn't
10 it?

11 A. So as I stated in my testimony, and I will restate
12 here if you would like me to, the Homepage ITA receives the
13 service request, and then it uses the services in the
14 service oriented architecture in order to carry out the
15 request that is being asked for by the client.

16 Q. So does the Layout Service receive a request that
17 includes this state information? Yes or no.

18 A. I don't really think it matters as it is not part of
19 my read here.

20 Q. So does it or doesn't it? Does the Layout Service
21 receive a request that includes the state information?

22 A. I don't know off the top of my head, but I believe
23 that is not relevant for my read.

24 Q. Do you know? You don't know.

25 A. I'd have to go back and look into my report.

Schmidt - cross

1 Q. Now, you haven't actually identified any Groupon
2 source code in the Homepage ITA that sends a request to the
3 Layout Service, have you?

4 A. I don't recall.

5 Q. Okay. And you looked at all of Groupon's source
6 code; right? You had access, as you testified, to all of
7 Groupon's source code; right?

8 A. I had access to all of Groupon's source code. That's
9 correct.

10 Q. And you have never identified any Groupon source
11 code at the Layout Service that receives a request from the
12 Homepage ITA, have you?

13 A. I don't recall.

14 Q. Okay. And you haven't ever identified any request
15 from the Homepage ITA to the Layout Service that includes
16 any of this state information, have you?

17 A. I don't recall.

18 Q. Okay. But sitting here today, you can't point to
19 any, you can you?

20 A. I have to look at my report.

21 Q. Okay. So once we get this request -- could I skip
22 forward, Brian, to 193?

23 So this is the next element of the claim. And
24 if I understand what you pointed to here, we still have this
25 guy here with the browser. You are now saying that the

Schmidt - cross

1 Homepage ITA receives a mustache template from the Layout
2 Service; right?

3 A. That's what that diagram from Groupon shows, yes.

4 Q. And the particular output that you point to in your
5 -- can I go to the next slide, please? Let's go to 205. One
6 more. Okay. Go back.

7 Okay. The particular mustache template you
8 point to as being the output is the purchase cluster
9 template; right?

10 A. I believe I pointed to the single option HTML
11 mustache template.

12 Q. Right, the single option mustache template. And you
13 haven't identified source code at Groupon from the Layout
14 Service that actually outputs that particular mustache
15 template, have you?

16 A. There is a lot of source code. I'm not sure. I
17 don't know off the top of my head.

18 Q. Well, you didn't identify it in front of the jury
19 today, did you?

20 A. The source code that I showed was the single option
21 mustache template.

22 Q. You showed the template, but you didn't show any
23 source code in the Layout Service that actually shows that
24 the Layout Service provides that template, did you?

25 A. No, I referred to this diagram here that explains

Schmidt - cross

1 what the purpose of the Layout Service is from this
2 document.

3 Q. Let's look at this document, though. It says service
4 that serves mustache templates. Now, this doesn't say that
5 the Layout Service serves the mustache template with the
6 "buy" button, does it?

7 A. It simply says that the Layout Service serves the
8 mustache template. That's correct.

9 Q. And there are lots of mustache templates you use on
10 Groupon's website. Right? Some of them are for the
11 headers, some are for the footers, and there is this one
12 that pointed to for the "buy" button; right?

13 A. There is that one, yes.

14 Q. And you have no evidence that the Layout Service
15 actually provides the mustache template with the "buy"
16 button, do you?

17 A. I wouldn't characterize my testimony like that at
18 all. In fact, I have lots of evidence that that is what is
19 happening.

20 Q. You don't have any source code from the Layout
21 Service that shows that it outputs that particular mustache
22 template that you are relying on, do you?

23 A. The slides I showed today don't show that source
24 code -- that source code is in the source code that I
25 reviewed.

Schmidt - cross

1 Q. Well, you haven't identified any of that source code
2 to the jury, have you?

3 A. As I mentioned, my testimony shows that the material
4 from the Groupon shared Layout Service documents.

5 Q. Well, you never identified any source code in the
6 Homepage ITA that requests or receives that particular
7 mustache template from the Layout Service either, have you?

8 A. I don't recall.

9 Q. You certainly didn't provide the jury with it today,
10 did you?

11 A. Today I showed the documents here that we're looking
12 at.

13 Q. If, in fact, the layout service doesn't provide that
14 Mustache template with the buy button, you have not shown
15 that Groupon meets this element of the claim, have you?

16 A. Well, yes, I have, because we've looked at the other
17 portions that demonstrated the information that was coming
18 back.

19 Q. Where have you shown that the Mustache template with
20 the buy button comes from the layout service? You just put
21 out this slide, you haven't shown any software that shows
22 that. You haven't shown any Groupon testimony that shows
23 that. You haven't put up a single Groupon document that
24 shows that. You have had this one generic document. So if
25 this generic document is not referring to this specific

Schmidt - cross

1 Mustache template that has the buy button, you haven't
2 proven anything, have you?

3 A. I wouldn't characterize it that way.

4 Q. So if you're wrong and, in fact, the layout service
5 does not provide the Mustache template with the buy button,
6 Groupon doesn't infringe this claim; right?

7 A. I don't believe I'm wrong.

8 Q. If you're wrong, Groupon doesn't infringe this claim
9 and IBM can't meet its burden to prove infringement; isn't
10 that true?

11 A. I wouldn't agree with that, no.

12 Q. Just going back to the state information, you have
13 not provided any information that the layout service
14 receives any state information from the home page ITA or any
15 other ITA; isn't that right?

16 A. That's not required by the claim element, that's
17 correct.

18 Q. So this is where you're talking about claim 54 which
19 depends on 51; right?

20 A. That's correct.

21 Q. So if you're going to infringe 54, you also have to
22 infringe 51?

23 A. That is correct.

24 Q. So if I'm right and you're wrong that the layout
25 service does not provide the Mustache template that includes

Schmidt - cross

1 that buy button, Groupon can't infringe 54 either; right?

2 A. Are you asking me the definition of depends?

3 Q. It's a yes or no question, sir. Please answer. If
4 I'm right and you're wrong, and the layout service does not
5 provide that Mustache template with the buy button, Groupon
6 does not infringe claim 54, either; right?

7 A. I don't agree with your premise, but --

8 Q. The premise is pretty clear, if I'm right and the
9 layout service doesn't provide that Mustache template with
10 the buy button, Groupon does not infringe claim 54; isn't
11 that true, sir?

12 A. I understand your question, but I don't agree with
13 your premise.

14 Q. But it has a premise. If my premise is right,
15 Groupon doesn't infringe claim 54; right?

16 A. If claim 51 is not infringed, claim 54 will not be
17 infringed.

18 Q. In addition, though, claim 54, you point to the state
19 information that is embedded at the various pledge ID's;
20 right?

21 A. So, yes, that slide is showing that the dynamically
22 downloaded computer program code the client would use to
23 perform that embedding step, that's correct, by embedding
24 the pledge ID in the continuation.

25 Q. You're saying the state information is these various

Schmidt - cross

1 pledge IDs, which these three are different?

2 A. There is more state information than just the pledge
3 IDs, but the pledge ID it is part of the state information.

4 Q. The only state information that you identified for
5 the jury today is these pledge IDs; right?

6 A. No, I don't believe so. You take a look at Jet's
7 Pizza, Nashville, I believe that I also identified that as
8 being a deal ID or a deal permalink, that was another piece
9 of state information identified.

10 Q. When you got to claim 54, the embedding step, you
11 relied on these pledge IDs?

12 A. For claim 54 what I'm showing is the pledge ID being
13 embedded.

14 Q. Claim 54 refers to said embedding step; correct?

15 A. That's correct.

16 Q. And said embedding step refers back to the embedding
17 step in claim 51; right?

18 A. That's correct.

19 Q. And in claim 51, the embedding step says embedding
20 said state information; right?

21 A. That's correct.

22 Q. And said state information refers back to the state
23 information that was received in the service request; right?

24 A. Partly. The state information could be various
25 things.

Schmidt - cross

1 Q. Let's be clear --

2 MR. OUSSAYEF: Your Honor, he should be able to
3 finish his answer.

4 THE COURT: Okay. I think counsel has been
5 pretty patient, but go ahead.

6 BY MR. HADDEN:

7 Q. We all know what said means in patent claims, right,
8 said means it's referring back to the prior instance of that
9 item, right, you understand that?

10 A. I do.

11 Q. So when it says said state information, that doesn't
12 mean any state information, that means the state information
13 that was described earlier in the claim; right?

14 A. That's correct.

15 Q. Okay. And the state information that was described
16 earlier in the claim was the state information that was
17 received with the service request; right?

18 A. That's also correct.

19 Q. And that's not these pledge IDs, these were not in
20 your service request?

21 A. I don't believe that's really true, because when the
22 information comes down there is a default, there is a
23 default option. If you were to go back a couple of slides,
24 you see there is a default option there, and the default
25 option will have a pledge ID filled in.

Schmidt - cross

1 Q. What you identified was the state information in the
2 service request step was the permalink for that necklace;
3 right?

4 A. Right. And also we saw that that has a default state
5 information that's put into that which is a pledge ID.

6 Q. No, you identified the permalink as the state
7 information that was received in the request, that wasn't a
8 pledge ID; right?

9 If we have to go back to the slide, we can.
10 Let's go back to 188. This is where what you said was the
11 state information. That's not those three pledge IDs?

12 A. So if you don't mind me stepping through all the
13 other claims as well.

14 Q. No, I'll ask the questions. This is what you
15 identified as the state information. Later claim refers
16 back to said state information. That means you got to point
17 back to the same information you had here, and you didn't do
18 it, right, you changed the state information?

19 A. So we're talking about claim 54, and that has said
20 inventing step.

21 Q. It does. Now it refers back to the embedding step in
22 claim 51, we agreed on that already, so we're back to claim
23 51 and that requires the state information that was in the
24 service request; right, and that's this, but that's not what
25 you pointed to in claim 54, is it?

Schmidt - cross

1 A. That's certainly part of what was there but --

2 Q. It was nowhere on that slide, we have to go back, we
3 have to go back to the slide that has claim 54. 214.

4 THE COURT: Is this the one you want?

5 MR. HADDEN: Yes.

6 THE COURT: 214.

7 BY MR. HADDEN:

8 Q. So 214 we have different state information for those
9 pledge IDs, we don't have permalink that describes the
10 network, so you switched the state information.

11 A. Well, to be fair, the example is different, the state
12 information couldn't be the same. The other example was the
13 My Three Treasures pendant and this is for Jet's Pizza.

14 Q. You never walked through an example that shows claim
15 54, you switched examples and you changed the state
16 information?

17 A. This example would be consistent for the analysis for
18 claim 51 and claim 54.

19 Q. But you didn't provide that evidence to the jury?
20 You never showed this pledge ID is received in a service
21 request anywhere?

22 A. This was a different example.

23 Q. Right. But to meet claim 54, you have to show that
24 this pledge ID was received in a service request in claim
25 51, and you didn't do it, did you?

Schmidt - cross

1 A. The examples were different to illustrate different
2 types of options.

3 Q. Just to be clear, you got to match every element of
4 the claim to infringe, you understand that; right?

5 A. Sure.

6 Q. You didn't provide any mapping of claim 54 where
7 Groupon performed every element, did you?

8 A. It's the same behavior.

9 Q. It's not the same behavior. You have three different
10 pledge IDs here and you pointed to one permalink before.
11 Nowhere did you connect the dots to show that these were
12 received in a service request, have you? Right? So you
13 have not met your burden of proving infringement of this
14 claim or claim 51, have you, Dr. Schmidt?

15 A. I wouldn't agree with that.

16 Q. Let's talk about the same patent, the same claim with
17 respect to the mobile apps. If we could go to -- let's to
18 go slide 228. So this is a little complicated. First off
19 in the mobile apps you're saying that the recursively
20 embedding step is performed by the claim, the mobile
21 applications; right?

22 A. The analysis shown in that slide is showing that the
23 client is recursively embedding the state information.

24 Q. So that's a yes?

25 A. That's a yes.

Schmidt - cross

1 Q. Thank you.

2 And again, what you show over here is the state
3 information, nowhere did you show that as being what is
4 received in the service request, did you, Dr. Schmidt?

5 A. I'm sorry, can you show me what you're referring to?

6 Q. Sure.

7 You're saying this is the state information;
8 right? These different pledge IDs in these different
9 operations have options. But again, this requires
10 recursively embedding the state information in all
11 identified continuations, but this is not the state
12 information that was received in the service request, is it?

13 A. Again, there is state information that is shown there
14 that is, in fact, included, such as the GA to Farm Kitchen.

15 Q. That's not what you identified as the state
16 information in the continuation?

17 A. Sure. If you look at the other part of the
18 continuation, it's a little hard to see, but you'll see the
19 GA to Farm Kitchen two also appears in that as well, too?

20 Q. These continuations with the state information are
21 what are received on the mobile client from the server;
22 right?

23 A. That's correct.

24 Q. So that's before the recursively embedding step;
25 right?

Schmidt - cross

1 A. That's correct.

2 Q. So that continuations already have the state
3 information when they're received from the client and
4 they're not modified to include that state information?

5 A. I don't agree with that. If you take a look at the
6 continuation that's shown on the left-hand side, the
7 information you see on the right-hand side is not the same.
8 The left-hand it says pledge ID equals 542, whatever, the
9 right-hand side it says deal option ID equals 542, whatever,
10 those are not the same.

11 Q. This is not a continuation. What you're pointing to
12 here is what gets sent from the mobile app after the user
13 has already selected an option; right?

14 A. That's --

15 Q. That's what you're showing there, right, this is the
16 information that gets that from the client to the server
17 after a continuation has already been selected by the user?

18 A. There is an identified continuation and --

19 Q. Just answer the question yes or no. What you're
20 showing here is what gets sent from the client back to the
21 server after the user has selected one of these options;
22 right?

23 A. What I'm showing there is what will be installed as
24 the HREF in the quick handler on the client portion.

25 Q. This says request headers, right? This is something

Schmidt - cross

1 that got sent from the client to the server; right?

2 A. Sure, but it didn't get sent out of thin air it got
3 sent --

4 Q. Just answer the question, sir. This is what is being
5 sent over the network from the client back to the server
6 after an option has already been selected; right?

7 Yes or no?

8 A. Yes, it will be sent.

9 Q. Okay. Thank you.

10 A. And it will be created by the quick handler which is
11 the continuation.

12 THE COURT: Dr. Schmidt, if he ask a yes or no
13 question, do your best to answer yes or no. If he wants
14 some more explanation, he'll ask you.

15 THE WITNESS: Okay.

16 BY MR. HADDEN:

17 Q. But the continuations are what the user can select
18 from, so the continuations are like for the hyperlinks, the
19 other things the user can choose to click on to extend the
20 conversation; right?

21 A. Hyperlinks is one example, yes.

22 Q. But that's not what you're showing here. What you're
23 showing here is a message that gets sent after the user has
24 already picked one continuation, so this isn't embedded in
25 all the identified continuations, this is what gets sent

Schmidt - cross

1 after the user has already picked his next option; right?

2 A. Yes.

3 Q. Right?

4 A. Modified continuation.

5 Q. So what this requires is recursively embedded state
6 information and all identified continuations, that means
7 putting it in all of these options before user picks one;
8 right?

9 A. I don't believe --

10 Q. You didn't show it?

11 A. I don't know if that's what the claim element is
12 construed to mean.

13 Q. It says applying a process one or more times to each
14 identified continuation, so the identified continuations are
15 these three options, right, so you got to go through each of
16 these three and modify it to include the state information;
17 right? That's what the claim says, right? You didn't show
18 that, all you showed was here is an unmodified continuation,
19 here is an unmodified continuation, here is an unmodified
20 continuation that already has state information. Then you
21 showed after user clicks on one, a different message gets
22 sent to the server, it has nothing to do with what the claim
23 requires.

24 A. I disagree.

25 Q. So where does the code modify all identified

Schmidt - cross

1 continuations to include state information and what is the
2 state information that gets included?

3 A. So what would happen is any one of those, any time a
4 user selects one of those options, I showed one for option
5 two, if the user had selected option one, then that would
6 have caused the modifying of that identified continuation in
7 order to be able to create a different or a modified
8 continuation that would correspond to option one. The same
9 would be the case for option three.

10 Q. Now, you recall that you were deposed in this case,
11 don't you, Dr. Schmidt, for two days?

12 A. I do.

13 Q. And you were under oath in your deposition, weren't
14 you?

15 A. I was.

16 Q. And you were supposed to express in your deposition
17 all of your opinions regarding infringement in this matter,
18 weren't you?

19 A. That's correct.

20 Q. Let's look at your deposition. It's in front of you.
21 This will be the second tab, it's page 485, lines 6 through
22 14.

23 A. Which page, please.

24 Q. It is page 485, lines 6 through 14. This is SB 74.

25 THE COURT: Hold on. Is there any objection?

Schmidt - cross

1 No objection. Okay. You can go ahead and play it.

2 "Question: Okay. But where does the code
3 modify all identified continuations to include state
4 information, and what is the state information that gets
5 included?

6 "Answer: So the state information is shown, for
7 example, in -- the state information that's modify is the --
8 sorry, the state information is the information that's
9 encoded in the original unmodified continuation."

10 BY MR. HADDEN:

11 Q. Was that you?

12 A. That was.

13 Q. And you testified that the state information is what
14 was in the unmodified continuation, so you haven't shown
15 anywhere with this code that actually modifies all
16 identified continuations to include state information as the
17 claim requires, have you, Dr. Schmidt?

18 A. I disagree with that.

19 Q. And if what you said in your deposition is correct,
20 you haven't shown that Groupon performs this element of the
21 claim in mobile applications, have you?

22 A. I disagree with that interpretation of what I said.

23 Q. Now, you don't even know what it means to modify an
24 existing continuation, do you, Dr. Schmidt?

25 A. Yes, I do know what it means to modify an exist -- I

Schmidt - cross

1 do know what it means, yes.

2 Q. Let's go back to your deposition. This is page 390,
3 lines 20 to 391, line 2. Again, you were under oath in your
4 deposition, you were supposed to express your opinions, all
5 of your opinions; right?

6 A. That's correct.

7 Q. That is SB 68.

8 "Question: Okay. So you don't know what it
9 means to modify an existing continuation?

10 "Answer: So it looks here as though a
11 continuation is a new request. So if a continuation is a
12 new request, I'm not sure what it means to modify something
13 that is new."

14 That was you; right?

15 A. That was, yes.

16 Q. Let's talk know about the Prodigy patents,
17 Dr. Schmidt. We turned to the Court's construction. Do you
18 recognize this from the claim construction in the juror
19 notebooks?

20 A. Yes, I recognize that.

21 Q. And in the Prodigy patents, both the '967 and the
22 '849 require an area for presenting applications; right?

23 A. That is correct. That is what the construction says.

24 Q. And for the '967 patent, you need another, a second
25 area of the screen for presenting a plurality of command

Schmidt - cross

1 functions; right?

2 A. Yes.

3 Q. And for the '849, you need another area of the screen
4 for presenting applications; right? I mean for
5 presenting -- let me restate the question. Let me restart.

6 You need, for the '849, both the area of the
7 screen for presenting applications like in the '967, but you
8 also need an area of the screen for presenting advertising;
9 correct?

10 A. That's not quite my understanding of those
11 constructions. I don't know that you need a separate
12 area -- or, I'm sorry, I didn't quite understand what you
13 said.

14 Q. Well, let's look at the construction: "at a second
15 area of one or more screens of display concurrently with
16 applications."

17 That is describing where the advertisements are
18 displayed; right?

19 A. It is saying the advertising is structured so it can
20 be presented at a second area. I agree with you on that.

21 Q. Right. So we have now essentially three areas of the
22 screen; right? We have an area for applications, we have an
23 area for advertisements, and we have an area for command
24 functions; right?

25 A. As long as we're consistent in talking about there

Schmidt - cross

1 are two different patents involved here. These are not same
2 patent, is that correct?

3 Q. Yes, but you are accusing the same web pages at
4 Groupon of infringing both patents. So to do that, we've
5 got to have all three areas; right?

6 A. Again, these are constructions that are explaining
7 what these terms mean.

8 Q. Right. So just to put things in context, right? So
9 we have three areas of the screen, right? We heard Mr.
10 Filepp talk about the real estate on the user screen. So we
11 have three pieces of real estate on the user screen: one of
12 them is for applications, one of them is for advertisements,
13 and one of them is for command functions. Right,
14 Dr. Schmidt?

15 A. I believe I was here when Mr. Filepp talked, and he
16 was talking about Prodigy as one embodiment of his patent.

17 Q. He was talking about his invention which is capturing
18 these two patents, wasn't he?

19 A. He was talking about Prodigy which is not the same
20 thing as his invention.

21 Q. Okay. And in addition to the areas for presenting
22 these three things -- right? -- applications, advertisements
23 and command functions, you have to have those three things,
24 too, right? You have to have an application or applications,
25 you have to have an advertisement, you have to have command

Schmidt - cross

1 functions; right?

2 A. I agree.

3 Q. So essentially we have like the monster game that Mr.
4 Filepp talked about, right? We have three areas of the
5 screen and we have three things to put in there, right? But
6 instead of having an area for head, an area for body, and an
7 area for feet, we have an area for applications, an area for
8 advertisements, and an area for command functions; right?

9 A. Yes and no. It's not from the claim constructions
10 you are showing here how these claim constructions fit into
11 the claim elements that we're talking about.

12 Q. Well, these are Court constructions; right?

13 A. These are the Court's constructions, I agree. And
14 these are what I used, to my knowledge.

15 Q. So we've got to figure out, if we're going to map
16 these claims on to Groupon, what are applications are, what
17 our advertisements are, what our command functions are, and
18 what are those three areas on the screen that they put in;
19 right?

20 A. That's correct.

21 Q. Okay. So let's start with the applications. Now,
22 you say -- and this is from your slide of your counsel --
23 that the application is a web page or is made up of a
24 collection of web pages; right?

25 A. Well, I use the Court's construction to define what

Schmidt - cross

1 is an application.

2 Q. Well, I'm not asking about the definition. I'm
3 asking about your attempt to read this patent on Groupon's
4 website. And when you did that, you identified as
5 applications, collections of pages on Groupon's website,
6 like the goods application you say which is a collection of
7 pages that describe goods and how users can purchase goods
8 on Groupon's website, right? That is what you said were the
9 applications.

10 A. Goods was an example of that, yes.

11 Q. And another example you had was local. So local
12 would be the collection of pages on Groupon's website that a
13 user would browse and could use to purchase a local deal on
14 Groupon's website; right?

15 A. That's correct.

16 Q. Okay. And you said that those applications are
17 made up of web pages; right? This is what you said in your
18 expert report: Groupon structured the applications that
19 made up the application. And you list all the components of
20 a web page; right?

21 A. That's correct.

22 Q. Right. So you say that the application is the entire
23 web page. It includes the images. It includes the HTML.
24 It includes JavaScript. Everything that is on this web page
25 is what you are saying is the web page; right?

Schmidt - cross

1 A. As you showed before, the red area was the
2 application. The visual portion is the application.

3 Q. Right, but the application is the images, the
4 JavaScript, the HTML, everything that is this web page;
5 right?

6 A. That's a slightly different question.

7 Q. Well, that what you said right here, isn't it, in
8 your expert report?

9 A. I'm talking about the web pages that make up the
10 applications.

11 Q. Correct. That's what I'm talking about, web pages.
12 This is a web page; right?

13 A. To display a web page, yes.

14 Q. So if the web page is the application, we've got to
15 have an area to put that application in; right? We have to
16 have some screen real estate that is the area for presenting
17 the application; right? And that has to be something other
18 than the application itself; right? Otherwise, it doesn't
19 make any sense. You don't present yourself; right?

20 A. Well, was that a question?

21 Q. So where do you identify here what the area is for
22 presenting this web page? What is the area of the real
23 estate on the user screen that is used to present this
24 application, this web page?

25 A. So based on my testimony, that would be the portion

Schmidt - cross

1 that is the visual portion that is created from the HTML
2 code that comes back with the divs, that has the global
3 container div, which is used to instruct how to format the
4 application so it can be displayed in one or more screens of
5 display.

6 Q. But you --

7 A. What we see here is one screen of display.

8 Q. But you just told me that the HTML, including the
9 global container div, was the application. So I'm trying to
10 figure out what is the area for presenting the application.
11 So I get it that you are saying that the -- you can go
12 back -- that you are saying the web page is the application,
13 but you got to have an area of real estate on the user
14 screen where you are going to put that application. You
15 can't tell me that it's the application. You've got to tell
16 me what the area is. So what is the area where Groupon puts
17 this application on the user screen.

18 A. So it's the part that is going to, it's the screen
19 in this case you are showing a browser that has exploded
20 the whole window. And the HTML code or the div that comes
21 down there is going to be used to format and present that
22 application in the visual portion of the screen of display.
23 That is a screen of display there and the visual portion
24 of the application showing up there on that application
25 display.

Schmidt - cross

1 Q. But you just told me the HTML was the application and
2 the div is part of the HTML. So are you telling me that the
3 application is presenting itself in its own area? Is that
4 what you are saying?

5 A. No.

6 Q. Okay. So what is the area that is not the web page
7 itself in which this web page is presented?

8 A. Well, I think it is showing on the screen right now.
9 It is showing a screen of display where the application
10 that is formatted using the divs and the HTML we just talked
11 about is being displayed on the screen of display.

12 Q. Well, so if I zoom my browser in and out, okay? So
13 what is the -- let me go back.

14 Now, is the area of the screen presenting that
15 web page the same now as it is here? (Indicating).

16 A. I'm not sure what that has to do with the claim.

17 Q. Well, that's a yes or no question. Can you answer
18 the question? So is the area presenting the web page the
19 same when I zoom my browser out like this as when I zoom my
20 browser -- oops -- like this? So is that the same area of
21 the screen that is being used to present that web page?

22 A. I'm not sure where area of the screen plays in here,
23 but you zoom the application in and out.

24 Q. Just, can you just answer the question; right? So we
25 have to have a first area of the screen that is going to be

Schmidt - cross

1 used to present this web page. And my question is when I'm
2 looking at my browser like this, okay? Is it the same area
3 of the screen as when I look at it in my browser like that?

4 A. All you are simply doing there is showing different
5 visual, different portions of the visual portion of the
6 application. Just zooming them in and out.

7 Q. Could you just answer the question yes or no? This
8 is being presented in the same area of my screen, this web
9 page when it's like this (indicating) or when it's like this
10 (indicating). So it's the same. Are you telling the jury
11 those are the same first area of the screen?

12 A. It's displaying different parts of the application.

13 Q. That wasn't the question. Are those two depictions
14 of that web page on this screen presented in the same area?
15 We have to have a first area for presenting applications.
16 Were those shown in the same first area?

17 A. It is showing the same application, zooming in and
18 out.

19 Q. That's not the question. It's a yes or no question.
20 I'm not asking the same application, I'm asking about the
21 same first area. So are those shown in the first same area
22 on the user screen? Yes or no.

23 A. I'm not sure I understand your question.

24 Q. So you can't answer that?

25 A. I'm not sure I understand what you are asking.

Schmidt - cross

1 Q. Now, the claim requires a first area for presenting
2 applications, plural, right? And you have identified, as we
3 talked about, multiple what you claim are applications on
4 Groupon's website, including the goods application, you say,
5 and the local deals application. But you don't have an
6 opinion whether the goods application is presented in the
7 same first area for presenting applications as the local
8 deal application, do you, Dr. Schmidt?

9 A. Well, I'm not sure -- I don't understand the
10 question. But if you show an application, the goods
11 application will show up in a first area. If you switch
12 applications, there will also be a first area. I'm not sure
13 I would consider that to be the same first area because it
14 is different applications, but they're both showing up in
15 the first area.

16 Q. Let's look back at your deposition again. So this
17 would be page 75, that would be the first tab, lines 5
18 through 1. And that is SP 57, Brian.

19 "Question: But you don't have an opinion
20 whether the goods application is presented in the same first
21 area for presenting applications as the local deals
22 application?

23 "Answer: Without knowing some definition or
24 construction of 'same,' it's hard to give an opinion that's
25 not speculation."

Schmidt - cross

1 Q. Okay. Is that you?

2 A. That is, in fact, me.

3 Q. Okay. So what would you define as the size of the
4 first area, your mapping of the Groupon website?

5 A. I'm not sure I really looked much at the issue of
6 size, although I could be happy to tell you different ways I
7 would look at size. Size was not something that showed up
8 in the claims or the construction of the claims. So I
9 didn't analyze it from that point of view, although I do
10 have an opinion about what size could mean.

11 Q. Let's go back to your deposition. This is page 44,
12 lines 4 through 10. SB 55.

13 Again, you were under oath and you were supposed
14 to provide all of your opinions regarding infringement in
15 this case in your deposition. You understood that; right?

16 A. That's correct.

17 Q. Okay.

18 MR. OUSSAYEF: Your Honor, may we approach?

19 THE COURT: Yes. You may approach.

20 (Sidebar conference held.)

21 MR. OUSSAYEF: Your Honor.

22 THE COURT: Yes.

23 MR. OUSSAYEF: The question asked of the witness
24 is: Did you take into account the size of the area?

25 And the deposition testimony opposing counsel

Schmidt - cross

1 seeks to play says you didn't take into account the size.
2 So it's not inconsistent. It is in fact consistent with
3 what he testified.

4 MR. HADDEN: Then he went on and said I have an
5 opinion, and he said in his deposition he didn't have an
6 opinion.

7 THE COURT: He went on today to say he has an
8 opinion.

9 MR. HADDEN: Yes.

10 THE COURT: But previously?

11 MR. HADDEN: He said I didn't have an opinion.

12 MR. OUSSAYEF: The question that is pending as I
13 understand is did you take into account the size of the
14 area.

15 MR. HADDEN: That's not the question. I read
16 the question and his answer. We'll see it is blah blah
17 blah, I don't have an opinion.

18 THE COURT: Do you agree he said he does not
19 have an opinion.

20 MR. OUSSAYEF: Yes, but the question pending
21 right now is do you have an opinion about the size? And he
22 said no, I don't have an opinion. I asked him.

23 It is consistent with what he said.

24 THE COURT: Well, let's ask the question.

25 (Mr. Desmarais softly speaks.)

Schmidt - cross

1 THE COURT REPORTER: I can't hear you.

2 THE COURT: Hold on. Let's deal with this
3 first.

4 MR. HADDEN: I asked him exactly the question
5 for the deposition read in, so I can do it again.

6 THE COURT: Let's do it again. And we don't
7 have to have a sidebar every time we do this. We had been
8 pausing, but I have been getting the impression you don't
9 have any objection, so we have just been letting it happen.

10 Sorry. Do you have another issue?

11 MR. DESMARAIS: Yes. This entire line is
12 contrary to the Court's *Markman*.

13 THE COURT: You have to speak up.

14 MR. DESMARAIS: This entire line is contrary to
15 the Court's *Markman*. Groupon pursued a claim construction
16 that the size of the area has to be fixed and that the
17 different areas can't be overlapping. Your Honor
18 specifically addressed that and said contrary to Groupon's
19 contention, the specification and prosecution history do not
20 support construing partition as a fixed nonoverlapping
21 portion of the screen display.

22 This entire cross, it has to be separate
23 different areas. They have to be.

24 MR. HADDEN: I didn't say fixed. He has to say
25 what the area is. That's all.

Schmidt - cross

1 THE COURT: Yes. All he is trying to do, I can
2 see, is establish your expert opinion on what the areas are.
3 You haven't said they have to be fixed. Is there anything
4 else?

5 MR. DESMARAIS: No.

6 THE COURT: Okay.

7 (Sidebar conference ends.)

8 THE COURT: When you are ready, let's ask the
9 question again.

10 MR. HADDEN: Sure. Let me ask the question
11 again.

12 BY MR. HADDEN:

13 Q. So what would you define as the size of the first
14 area in your mapping of the Groupon website, Dr. Schmidt?

15 A. So that was not part of the claim or claim
16 construction. And so I'm not sure I really analyzed that
17 because it wasn't part of what I thought the claims were in
18 the case.

19 Q. So does Groupon specify the size of the first area?

20 A. That is another very interesting question. It does
21 in various ways through the content that it sends down, for
22 example.

23 Q. Okay. Let's look at your deposition again. This
24 would be page 41, lines 14 through 19. And this is SP 54,
25 Brian.

Schmidt - cross

1 "Question: So does Groupon specify the size of
2 the first area?

3 "Answer: It's not clear to me that there's any
4 need for Groupon to specify the size of the first area."

5 BY MR. HADDEN:

6 Q. Okay. Now, you have talked a lot within IBM's
7 counsel in front of the jury about these div tags. And you
8 say that, you talked a lot about the global container div
9 tags; right?

10 A. That's correct.

11 Q. Now, div tags are part of the HTML of the web page;
12 correct?

13 A. That's correct.

14 Q. Okay. Where does the div specify the size of the
15 first area?

16 A. So that the div plus the attribute like IPO class is
17 used by style sheets in order to figure out how to lay out
18 the -- in order to instruct the browser in order to have a
19 layout of the page.

20 Q. Okay. Let's see your deposition again, Dr. Schmidt.
21 This is page 41, lines 9 through 13. It's SB 53?

22 MR. OUSSAYEF: Objection. That is not
23 inconsistent, Your Honor.

24 THE COURT: Okay. Mr. Hadden, did you want to
25 respond?

Schmidt - cross

1 MR. HADDEN: It is inconsistent. I can read it.

2 THE COURT: I'm going to overrule the objection.

3 The jury will decide.

4 "Question: Well, where does the div specify the
5 size of the first area?

6 "Answer: So I don't think there's any need for
7 the div to specify the size of the first area."

8 Q. That was you again, right?

9 A. That's correct.

10 Q. Can we go back.

11 Now as you saw, as you agree the div tag is part
12 of the HTML and they're defined in the HTML specification;
13 is that right?

14 A. That's correct.

15 Q. And as explained here in this document from the
16 Mozilla Developer Network, the div is what they call a pure
17 container, div almost is not inherently represent anything,
18 do you see that?

19 A. I do.

20 Q. You agree with that, don't you?

21 A. I agree with that plus the following sentence that
22 says that it's used to group content so it can be easily
23 styled using the class or ID attributes as I mentioned many
24 times in my testimony.

25 Q. And that's described here, right, the HTML content

Schmidt - cross

1 division element div is the generic container for flow
2 content. It has no effect on the content or layout until
3 styled using CSS. Do you see that?

4 A. That's correct.

5 Q. So what that's saying that just having a div tag in a
6 web page does not do anything unless there is a style sheet,
7 that's what a CSS is, right, cascading style sheet.

8 A. That's what CSS stands for.

9 Q. A style sheet or some Java script that refers to that
10 particular div tag and tells the browser to do something
11 with it; right?

12 A. That's correct.

13 Q. And so just a pair of div tags by themselves, they
14 don't change the layout or format or size of a web page;
15 right?

16 A. You're correct. And I showed IDs and class
17 attributes after them as this document mentions, which are
18 part of CSS.

19 Q. Have you identified any style sheets that refer to
20 the global container div tag?

21 A. Yes.

22 Q. What is that? Where was that in your presentation?

23 A. Every time I showed the snippets of the ID equals
24 global container.

25 Q. That's just an identifier for div tag. Now, if the

Schmidt - cross

1 browser is going to do anything with this particular div
2 tag, there has to be some reference to this global container
3 div tag and a style sheet or a Java script; right?

4 A. That's correct.

5 Q. And you haven't shown any style sheet or Java script
6 that refers to or does anything with this global container
7 div tag?

8 A. Well, actually the layout on the human language on
9 the left is, in fact, the output of the web browser
10 processing the global container style guide to show what it
11 lays out there.

12 Q. Well, that's not true at all and you know that. So
13 this doesn't do anything unless there is a style sheet or
14 Java script that tells the browser that this global
15 container div tag should be used in some formatting or
16 layout; right? And you haven't identified any style sheet
17 or Java script that refers to this global container div tag
18 to tell the browser to do anything with it.

19 A. ID --

20 Q. Correct?

21 A. No, ID attribute is identifying the global container.

22 Q. That's just a name. This is just identifying that
23 particular pair of div tags; right? That doesn't do
24 anything. You have to have Java script or a style sheet
25 that says for global container to do something; right? And

Schmidt - cross

1 you haven't shown anything that does anything with that
2 global container; right?

3 A. I don't agree with that at all.

4 Q. Where is the style sheet that you identified here
5 that refers to global container div and tells the browser to
6 do something with it?

7 A. As I explained before, that's what's shown being
8 represented on --

9 Q. No, you pointed to the web page. Listen carefully to
10 the question. The web page is what the browser outputs.
11 What I'm asking you is, what is in the HTML or in the Java
12 script that refers to this particular global container div
13 tag that would cause the browser to do something with it
14 that would change the way this web page would look, where
15 did you identify that? Is it here?

16 A. That's not a complete HTML file.

17 Q. But you didn't identify anything in any HTML file
18 that refers to this global container div tag, did you?

19 A. I'm not sure if the snippets are shown elsewhere, but
20 that tag is what is used to generate that display.

21 Q. But you haven't shown that; right? If you're going
22 to show that this tag had any effect on this display, you
23 have to first show that there is some Java script or style
24 sheet that refers to this global container div tag and tells
25 the browser to do something with it; right?

Schmidt - cross

1 A. I don't agree with that, no, I'm sorry.

2 Q. Well, we just agreed that just having this tag in the
3 HTML with no reference to it in a style sheet or Java script
4 is going to do nothing; right?

5 A. I don't agree it does nothing. It does what we see
6 on the left-hand side.

7 Q. Let's be clear. Now you're playing games. We agree
8 that unless there is a style sheet or Java script that
9 refers to a specific div tag, that div tag even if you give
10 it a name, you can call it Fred instead of global container,
11 it would still do nothing in changing how this web page is
12 rendered?

13 A. I'm sorry, I disagree with that.

14 Q. You think if I wrote div equals Fred instead of
15 global container that this web page would change?

16 A. No. What I'm saying is that the HTML code that
17 Groupon is downloading is generating a display that we're
18 seeing on the left-hand side.

19 Q. That's not the question. You got to listen to the
20 question. I'm not talking about whether there is a web
21 page. I get that. The question is what does this global
22 container div tag do? And you have hung your hat on it as
23 saying this is what defines an area on a screen. And if you
24 tell the jury that, you got to tell them how it does it.
25 Right? We all agree that this is just an identifier of a

Schmidt - cross

1 div tag which would do nothing unless something else tells
2 the browser to do something with it.

3 So you picked up on this one because it says
4 global container, but we agree I could call this Fred and it
5 would make no difference; right? That name is just
6 arbitrary unless it's referenced by a style sheet or a Java
7 script. You haven't shown any style sheet or Java script
8 that does anything with global container that --

9 MR. OUSSAYEF: Objection. There is no question.

10 THE COURT: Mr. Hadden, let's not do oral
11 argument.

12 MR. HADDEN: Sorry, Your Honor.

13 THE COURT: Go ahead and ask your question.

14 BY MR. HADDEN:

15 Q. Let's be clear, if there is no style sheet or Java
16 script that refers to this global container, div tag, I can
17 delete this global container div tag from the web page and
18 it would look exactly the same; right?

19 A. I'm not sure I agree with that.

20 Q. Have you tried it?

21 A. No, I didn't try that.

22 Q. Did you do anything to investigate whether or not
23 having this global container div tag on the page or not
24 would have any effect on how this page looked?

25 A. I didn't change the Groupon code, no.

Schmidt - cross

1 Q. But, I mean, that's easy to do, right, you have your
2 Chrome browser, you go to view source, you can delete this
3 and see if the page remains the same?

4 A. I could do that.

5 Q. But you didn't do that?

6 A. I didn't do that.

7 Q. You didn't identify anywhere in any expert report any
8 Java script or style sheet that refers to that global
9 container div tag?

10 A. I'm not sure.

11 Q. So if I'm right and I can delete that global
12 container div tag from the web page and the web page
13 remained exactly the same in my browser, you haven't shown
14 that that global container div tag defines an area of the
15 screen, have you?

16 A. I don't know that I agree with that.

17 Q. If I can take it out and the page looks exactly the
18 same, how can you say that that global container div tag is
19 what it is, generating a first area of the user screen?

20 A. I need to try it out and see.

21 Q. But if I'm right, let's assume I'm right, assume I'm
22 right that I can delete that global container div tag from
23 the HTML and the page looks exactly the same in the browser,
24 you would agree with me then that you have failed to prove
25 that that global container div tag generates a first area on

Schmidt - cross

1 the user screen; right?

2 A. Again, I don't subscribe to your assumption.

3 Q. But if I'm right, I'm right, and you haven't shown
4 that Groupon generates a first area; right?

5 A. I don't know if I agree with that or not.

6 Q. And if Groupon doesn't generate a first area using
7 this global container div tag, then Groupon doesn't infringe
8 the '967 patent and doesn't infringe the '849 patent?

9 A. I don't agree with that.

10 Q. Well, both of them require generating a first area,
11 and the only thing you pointed to on the website is this
12 global container div tag; right? You told the jury about it
13 umpteen times today, didn't you?

14 A. It was yesterday.

15 Q. Thank you.

16 So if I'm right, that element is gone, at least
17 that element; right? And therefore, Groupon won't infringe.
18 The same for the '967 patent.

19 Now, we also need a second area for displaying
20 advertisements; right?

21 A. Yes. For the '849?

22 Q. Yes.

23 Let me go back before we get to the '849. We
24 also for the '967 need a second area for displaying command
25 functions?

Schmidt - cross

1 A. Yes.

2 Q. When I scroll down the page like this, where is the
3 second area for displaying command functions?

4 A. It's not currently being shown on the screen display.

5 Q. But we're talking about an area of the screen, so is
6 there an area of the screen now for displaying command
7 functions?

8 A. Yes.

9 Q. Right there, where is it on the screen?

10 A. Not showing a visual portion for the moment.

11 Q. Are you saying the screen has nonvisual portions?

12 A. The application contains a first area and a second
13 area, and that code hasn't disappeared.

14 Q. That's a good point you just made. You said the
15 application has a first area and a second area. I don't
16 dispute that. The web page has different areas, but that's
17 not what the claim requires, the claim requires that there
18 is an area of the screen displayed for displaying command
19 functions and an area of the screen display for visual
20 application, the screen real estate that Mr. Filepp talked
21 about. Where is the area of the screen display that is
22 displaying command functions now?

23 A. Again, the command functions are part of the HTML.
24 And if you scroll up, you'll find them.

25 Q. So you're agreeing that the command functions are not

Schmidt - cross

1 in an area of the screen display, they're just part of the
2 web page which you're saying is also the application; right?

3 A. Well, as we saw before, the HTML is nested.

4 Q. So let's talk about ads for a second. Now, you have
5 said that this is the first area, and this is the
6 application; right?

7 A. We're referring to '849 at this point?

8 Q. Yes.

9 A. It's a first area for displaying the application.

10 Q. And the web page is the application, we went through
11 that; right? The web page, we saw that right, the web page
12 with all the images, the HTML, the Java script, that's the
13 application; right?

14 A. The HTML defines the area that can be generated, yes.

15 Q. Well, let's go back. I'm not talking about areas
16 now, I'm talking about applications. We're done with areas.
17 We're moving on. So we have an application which you said
18 is the web page; right? And it's got HTML, it's got Java
19 script, it's got images; right?

20 A. So application has a specific meaning and it's a
21 sequence of pages, so this is a page.

22 Q. I'm not asking about what the Court's construction
23 is, I'm asking about your attempt to mount these patents on
24 to Groupon I thought we talked about this already, you
25 identified the web pages that relate to local deals or goods

Schmidt - cross

1 or whatever as being the application; right?

2 A. Local goods are examples of applications.

3 Q. And what you're saying is the application is the
4 collection of web pages the user goes through to buy goods
5 or local deals, those are the two local applications you
6 talked about?

7 A. Local and deals are two of them.

8 Q. And now, so you were -- you show this as being this
9 web page, and then when you get to the advertising, the
10 second area for displaying advertisements, you just drew a
11 box around part of what you previously said was the
12 application; right? That can't work because the application
13 is this and it's a first area --

14 MR. OUSSAYEF: Objection.

15 THE COURT: The objection is sustained. You
16 asked the question and then you went on with a speech. Ask
17 the question.

18 MR. HADDEN: Sorry, Your Honor.

19 THE COURT: Go ahead and ask the question.

20 MR. HADDEN: Sure.

21 BY MR. HADDEN:

22 Q. So this is the application in the first area;
23 correct?

24 A. That's correct.

25 Q. And now you're saying that this is the application in

Schmidt - cross

1 the first area, the red box, it goes down, and you're
2 saying, you're drawing a box within that be and you're
3 saying that this is advertising in the second area, is that
4 what you're saying?

5 A. So just to be very clear, the application is being
6 displayed, format and displayed in the first area, the part
7 in red, and then there is the advertising data that's being
8 displayed in the second area, which is the part that's
9 surrounded by the blue overlay just to draw attention to
10 that part, that's the second area.

11 Q. But you previously said that these images are --
12 these are images for local deals, you said those are part of
13 the application; right?

14 A. So there is a very deep set of issues, but the
15 application images are downloaded separately, they
16 eventually show up in the browser. And as to whether
17 they're part of the application, HTML, it's a subtle issue,
18 but the key point there is there is a first area for
19 displaying the application, which includes all the stuff
20 that we see up there on the left hand and there is a second
21 area that we see in the blue part which is where the
22 advertisers are displayed.

23 Q. I'm not trying to be tricky, but this picture of the
24 pizza in the local deals, is that part of the application?

25 A. So that particular snapshot shows things appearing

Schmidt - cross

1 within that which is not inconsistent with the claims.

2 Q. So this is within the application, and in the first
3 area, and over here you're trying to say it's also an
4 advertisement within a second area, that's what you're
5 saying?

6 A. So what I'm showing there is that the advertising is
7 being displayed in a second area and we see a first area
8 which is the enclosing application.

9 Q. But you're saying that the picture of pizza is both
10 in the application in the first area, and also in
11 advertisement in the second area, that's what you're saying?

12 A. Sure, nothing inconsistent about that.

13 Q. I just want to be clear what you're saying. In your
14 expert report you agree some other boxes, this is from your
15 slide yesterday with the jury, and you have the second area
16 being this blue box and then before you had in your expert
17 report, you had these three red boxes and also this red box
18 at the top. So how are you drawing these boxes?

19 A. Those boxes are highlighting what are advertising.

20 Q. And you're deciding it's advertising because it talks
21 about a deal, is that how you're deciding it's advertising?

22 A. So in the case of an application, I think that's the
23 local deals application, then the images and the other
24 surrounding text would be the advertisements that are being
25 presented by Groupon as part of the local deals application.

Schmidt - cross

1 Q. So the purpose of a local deals application is to
2 give people information about local deals; right?

3 A. There is other things that it does, but that's
4 certainly a portion of what it does, probably a key portion.

5 Q. And the key portion of that is to provide people with
6 local deals; right?

7 A. That's certainly one of the things that that
8 application is doing, yes.

9 Q. So you're not saying that if I took out the local
10 deals, I would still have an application, a local deals
11 application; right?

12 A. I'm not saying if you took out the local deals would
13 you still have a local deals application. I'm not sure I
14 understand the question.

15 Q. Well, if I took out what you were calling
16 advertisements now, I would be left with this, right? And
17 my question is, is that an application, is that a local
18 deals application in the first area still?

19 A. If you don't mind scrolling up just a tad.

20 Q. Sure. If I can get it to work.

21 A. Can we stop? You keep going past the part.

22 There is other stuff that we're showing in that
23 application which unfortunately has been and animated past,
24 but there were other things in there that looked like they
25 had to do with local deals, so just removing the advertising

Schmidt - cross

1 data portion which is not how Groupon data works, if you
2 remove that, there are still things on the left-hand side
3 that zoom by very quickly that looked like they were part of
4 the application.

5 Q. So you were saying this would be the local DEALS
6 application and the rest is just advertising?

7 A. Well, so this, I'm not sure what you mean by this,
8 but if we were able to scroll back up the part that whizzed
9 by a second ago. This is the footer. But if we went back
10 to the part that has now scrolled past, we would see other
11 things up there. And that would be part of the local deals
12 application. In fact, that is not in the second area where
13 the advertisements are appearing.

14 Q. Let me see if I have it here. Now, when you were
15 talking about the '346 patent, you put up and discussed this
16 screen as the way that the triggering step occurred. This
17 is your slide from today; correct?

18 A. That tis correct.

19 Q. Now, this is the login screen. It says here: I have
20 an account. Do you see that?

21 A. Yes.

22 Q. Okay. But this is the screen that a user goes to if
23 they already have an account; right? That is why it says:
24 I have an account.

25 A. Let's see. Well ...

Schmidt - cross

1 Q. Is that what it says?

2 A. Sure. That's what it says. It is not necessarily
3 what they want to log in with.

4 Q. Okay. But the whole purpose of the '346 patent in
5 claim 1 is to create an account where the user doesn't have
6 one already; right?

7 A. That would be the case, yes.

8 Q. Right. But you're starting from a page where the
9 user already has an account; right? So if I don't have an
10 account, I'm not going to be using this page; right?

11 A. If you don't have an account, a page that looks like
12 that page will pop up, and it will give you several options
13 for how to sign.

14 Q. But that is not the page you worked on. You analyzed
15 the page where the user already has an account.

16 A. I'm not sure I analyzed the page. No, I analyzed
17 many different ways to log in.

18 Q. Well, this is the page that you -- this is your
19 exhibit; right? This is your demonstrative; right? And the
20 page is: I have an account. And you are showing some what
21 is some computer code from the web page for this page. And
22 that is the page where the user already has an account.

23 A. I disagree that is a page for which the user already
24 has an account.

25 Q. It says, right there, I have an account?

Schmidt - cross

1 A. "Have" is clicked on but that doesn't mean the user
2 has an account. If you click I'm a new customer, it will
3 switch over to something different. That is just something
4 you could have showing up there.

5 Q. Sure. There is another page you could get, if you
6 don't have an account, and you do that by signing up; right?
7 You click here and you get a different page, sign up. I'm a
8 new customer. But you never talked about this page today,
9 did you?

10 A. Well, actually I did. I showed many different
11 versions of it.

12 Q. No, you never showed this page that says "I am a new
13 customer." You always showed the "I have an account page;"
14 correct?

15 A. I don't remember.

16 Q. You don't know whether you did or didn't?

17 A. There were lots of images that were shown there.

18 Q. Now, this is there your expert report. In your
19 expert report, you said Groupon's customers, and endusers,
20 directly infringe the patents in suit, didn't you?

21 A. That's correct.

22 Q. Now, you talked about some percentages today based on
23 things like number of cacheable objects and 12.5 percent for
24 the '601 patent. You are not an economist, are you,
25 Dr. Schmidt?

Schmidt - cross

1 A. No.

2 Q. You are not an accountant, are you?

3 A. No.

4 Q. You are not offering a damages opinion in this case,
5 are you?

6 A. No.

7 Q. None of those percentages you put up are percentages
8 of Groupon's revenue that Groupon would not have gotten if
9 it somehow didn't use these patents according to you, are
10 they?

11 A. These percentages were looked from the point of view
12 of a technical expert.

13 Q. Right. So they're not percentages of Groupon's
14 revenue?

15 A. They're percentages -- in this case, percentages of
16 Groupon's cacheable objects in the context of the '967
17 patent.

18 Q. Right. So they're not a percentage of Groupon's
19 revenue, correct?

20 A. Those numbers are percentage of Groupon's cacheable
21 objects, not their revenue.

22 Q. And you offered no opinion about the percentage of
23 Groupon's revenue that is attributable to any of thee
24 patents, do you?

25 A. I'm not making that testimony, no.

Schmidt - redirect

1 MR. HADDEN: No further questions.

2 THE COURT: Okay. Redirect.

3 MR. OUSSAYEF: Yes, Your Honor.

4 If we could flip to slide 188, please.

5 REDIRECT EXAMINATION

6 BY MR. OUSSAYEF:

7 Q. Dr. Schmidt, do you remember being asked about this
8 slide 188?

9 A. I do.

10 Q. Now, I want to call your attention to the claim
11 language. Does the claim -- oops. There we go.

12 So I want to call your attention to the claim
13 language. Does the claim element say anything about the
14 client sending the service request here?

15 A. No, it does not.

16 Q. And does the Layout Service need to receive a request
17 from the client to meet this claim language here?

18 A. No, it does not.

19 Q. And can you send a service request to one component
20 of the network even though another component outputs the
21 result of that service request?

22 A. Yes, absolutely. That is part of what a service
23 oriented architecture is all about.

24 Q. Can you explain a little bit how that happens or how
25 that can happen?

Schmidt - redirect

1 A. Sure. So this a technical explanation and there is
2 also more of a human explanation.

3 So in a service oriented architecture, there is
4 services, they're sometime called Frontend Services, and
5 they take the requests that come in and then they divvy them
6 up as we're seeing here to various backend services. That
7 is literally the definition of a service in a service
8 oriented architecture, which is a concept that has been
9 around since the early 90s, and it essentially allows
10 service to be composed of other services and the service
11 that receives it can delegate how to do the work and return
12 the output. There is also more.

13 Q. Yes, go ahead if you have more explanation to give.
14 Is there any way to understand that kind of technical idea
15 in kind of a more easy to understand and commonsense way of
16 thinking about it?

17 A. Sure. Since we don't all do service oriented
18 architectures, if you go to a drive-thru, you might place
19 your order, for your service, for your hamburger and french
20 fries and soda at a microphone at one part of the
21 drive-thru. So you place your service there. And then you
22 will drive around, and all the different backend services,
23 the cook and the person who takes the fries from the heat
24 lamp and the person who pours the coke, those are different
25 service entities, can go ahead and create their outputs,

Schmidt - redirect

1 create the hamburgers, create the fries, create the drink,
2 and then you will actually pick up the results at some other
3 window. You won't pick it up from the place you ordered.
4 You pick it up in the window. That is an example of backend
5 services, taking a user request for services and then doing
6 processing and returning your results to some other place.

7 Q. So to bring it back to slide 88. What you are saying
8 is that the Homepage ITA can receive a service request even
9 if the Layout Service outputs the results of that service
10 request?

11 A. Yes, that's exactly right.

12 Q. Okay. Now looking at this slide here, do you
13 remember counsel for Groupon was asking you about the
14 Homepage ITA, and he asked you several questions about
15 whether it was really the Homepage ITA or not?

16 A. Yes.

17 Q. Now, if this were a different service oriented piece
18 or component in a network and it was named a different thing
19 beside the Homepage ITA, such as, for example, the Dealpage
20 ITA and that made a request to Layout Service and backend
21 services, would that change your opinion, Dr. Schmidt?

22 A. No, it wouldn't. It's simply the way that service
23 oriented architectures are defined from a technical
24 perspective.

25 Q. Okay. Let's call up slide 214, please.

Schmidt - redirect

1 Now, do you remember that counsel for Groupon
2 was asking you a bunch of questions about slide 214 here?

3 A. I do.

4 Q. In particular, he was asking you again and again
5 about pledge ID. Do you remember that?

6 A. Yes.

7 Q. And counsel for Groupon implied that there was no
8 evidence that a service request contained a pledge ID. Do
9 you remember that?

10 A. I do.

11 Q. And you mentioned that there might be other slides
12 that were relevant to this. Do you remember that?

13 A. Yes.

14 Q. Let's take a look at one of those slides. So could
15 we please flip to slide 189.

16 What does Mr. Sood say about whether requests
17 contain pledge ID state information?

18 A. So he is asked: When Groupon's servers receive an
19 URL, how do the servers know what deal I'm buying?

20 And he says: There is a pledge ID associated
21 with the URL.

22 And then he is asked: So the pledge ID is
23 included in the request that's sent to the Groupon's service
24 at least?

25 And he agrees: Yes.

Schmidt - redirect

1 Q. Thank you, Dr. Schmidt. Now if we could please turn
2 to slide 36.

3 Now, here we see claim 1 of the '849 patent; is
4 that right?

5 A. That is correct.

6 Q. Now, do you remember counsel for Groupon was asking
7 you over and over again about areas of the screen?

8 A. I do.

9 Q. Does the claim element say areas of the screen in --
10 let's look at Section 1(a). Can you just read that claim
11 language for me?

12 A. Sure. It says: "structuring applications so that
13 they may be presented, through the network, at a first
14 portion of one or more screens of display."

15 Q. So does this claim language refer to portions of the
16 screen or portions of a screen of display?

17 A. It refers to portions of one or more screens of
18 display.

19 Q. In fact, it doesn't even limit it to one screen. It
20 could be more than one screen; isn't that right?

21 A. That's right. And we looked at some examples in my
22 testimony where I showed the visual portion of the
23 application which can, of course, appear on multiple screens
24 of display. One or more screens of display.

25 Q. Do you remember counsel for Groupon asked you a bunch

Schmidt - redirect

1 of questions about the size of the areas? Do you remember
2 that?

3 A. Yes, I do.

4 Q. Does this claim say anything about the size of the
5 area?

6 A. No, there is nothing in any of the elements in this
7 claim that mention size, and there is also nothing in any of
8 the constructions, the Court's official definition of the
9 terms in the claim that mention size.

10 Q. So were you able to analyze this claim language even
11 though you didn't precisely measure what the size of the
12 partitions or the areas were?

13 A. Yes. Absolutely. That is why I didn't understand
14 the question. Because the size isn't part of the claim.
15 It's not part of the construction. It seemed to require
16 speculation on my part, so I didn't look at that in the
17 analysis.

18 Q. Let's look at slide 254.

19 Now, do you remember on counsel for Groupon
20 asked you about this screen on the left side of slide 254
21 here?

22 A. I do.

23 Q. And he mentioned that "I have an account" there, that
24 tab has a green underline under there. Do you remember
25 that?

Schmidt - redirect

1 A. I do.

2 Q. Now, you can click on the other part right there
3 which says "I'm a new customer," right?

4 A. Absolutely.

5 Q. And then you will still see the Facebook and Google
6 buttons, right?

7 A. Yes, you will.

8 Q. And your code will still be entirely relevant?

9 MR. HADDEN: Objection. He never showed this
10 document in his report.

11 THE COURT: Overruled, but it is leading so
12 let's ask direct questions.

13 BY MR. OUSSAYEF:

14 Q. Dr. Schmidt, if you were to look at the "I'm a new
15 customer" tab, would the code you should on the right side
16 of 254 still apply?

17 MR. HADDEN: Objection.

18 THE COURT: Overruled.

19 THE WITNESS: Could you please repeat the
20 question.

21 BY MR. OUSSAYEF:

22 Q. If you were to click on the "I am a new customer"
23 section of the web page shown on the left there, would the
24 code you are shown on the right still apply?

25 A. Yes. Absolutely. That code is the code provided by

1 Groupon that triggers the single-sign-on operation in that
2 case for the Google single-sign-on.

3 MR. OUSSAYEF: I have no further questions.

4 THE COURT: Okay. Thank you, Dr. Schmidt. You
5 can step down.

6 Who is going to be next from IBM?

7 MR. DESMARAIS: We have a few short deposition
8 clips and they're short so we can easily do it if you want
9 to continue.

10 THE COURT: Short meaningless than 15 minutes?

11 MR. DESMARAIS: Yes.

12 THE COURT: Okay. We'll at least start with one
13 of them.

14 Ladies and gentlemen, a deposition as you may
15 have gathered is a statement given under oath by a witness
16 some time prior to trial. As you have already seen,
17 sometimes they're videotaped, and you may now be about to
18 see some portions of some reported testimony.

19 MS. SHAMILOV: Your Honor?

20 THE COURT: Yes.

21 MS. SHAMILOV: I'm sorry. We have a small issue
22 we were not provided with updated clips.

23 THE COURT: Hold on a second. So we certainly
24 won't go beyond 1:00 o'clock but we might get started with
25 this.

1 I'm sorry?

2 MS. SHAMILOV: We haven't seen the updated.

3 THE COURT: I can't hear you. I'll see you at
4 sidebar.

5 (Sidebar conference held.)

6 (Counsel confer.)

7 THE COURT: Are you working this out?

8 MS. SHAMILOV: We resolved so it we're not going
9 to play that clip.

10 THE COURT: Okay.

11 (Sidebar conference ends.)

12 THE COURT: All right. So IBM may call its next
13 witness.

14 MR. OUSSAYEF: Thank you, Your Honor.

15 IBM calls by deposition Aileen Sandridge. She
16 is the Vice President of Engineering at Groupon.

17 THE COURT: And about how long do you estimate
18 these clips are?

19 MR. OUSSAYEF: So this first clip here, Your
20 Honor, is six minutes and one second.

21 THE COURT: Okay. And it's videotaped, is that
22 right?

23 MR. OUSSAYEF: Yes that's correct.

24 THE COURT: We'll turn the lights down.
25 You can go ahead and play that.

deposition designations - Sandridge

1 (Video played.)

2 "Question: Can you please state your full name
3 and address for the record?

4 "Answer: Yes. Aileen Juliana Sandridge.

5 "Question: And where do you work?

6 "Answer: I work at Groupon.

7 "Question: And what is your title at Groupon?

8 "Answer: VP of Engineering.

9 "Question: With regard to the Groupon mobile
10 applications, are images ever prefetched to the user's
11 mobile device before they are displayed to the user?

12 "A Voice: Same objection.

13 "Answer: Yes.

14 "Question: In what situation are images
15 prefetched to a user's device before they are displayed to a
16 user?

17 "Answer: Sometimes images are prefetched in
18 order to improve start-up latency.

19 "Question: Can you explain what you mean by
20 that?

21 "Answer: To make the application start up
22 faster when you open it on your phone, we prefetch images so
23 we don't have to go over the network to get them at the time
24 when you on the application.

25 "Question: What images are prefetched to a

deposition designations - Sandridge

1 user's device in order to start improvement start-up
2 latency?

3 "Answer: To my understanding for both iOS and
4 Android at the time, we -- the applications prefetch some of
5 the deal images in order to improve start-up latency.

6 "Question: In what cases would it not be
7 prefetched to the user's mobile device?

8 "Answer: So, again, I don't know for certain.
9 I believe that if you have background permissions turned off
10 for the application on your phone, I believe that we
11 wouldn't be able to prefetch that data. But -- so that
12 would be one example.

13 "Question: So, in your experience, does
14 pre-fetching deals and imaging improve the start-up time?

15 "Answer: Yes.

16 "Question: And why is it beneficial to improve
17 the start-up time for the mobile applications?

18 "Answer: We believe that users will have a
19 better experience if they -- if the application starts up
20 faster.

21 "Question: Why is it beneficial for users to
22 have a better experience?

23 "Answer: Because people don't like waiting.

24 "Question: The Groupon mobile applications
25 cache images, correct?

deposition designations - Sandridge

1 "Answer: Yes, I believe so.

2 "Question: How do the Groupon mobile
3 applications determine whether or not to cache deal images?

4 "Answer: I do not know.

5 "Question: Okay. But just to clarify, it's the
6 Groupon mobile application packages that cache the deal
7 images, correct?

8 "Answer: Yes.

9 "Question: Have you ever visited Groupon's
10 website as part of your job responsibilities?

11 "Answer: Yes.

12 "Question: Have you ever visited Groupon's
13 website without disabling cache as a part of your job
14 responsibilities?

15 "Answer: Yes.

16 "Question: Why does Groupon want to reduce
17 latency?

18 "Answer: To improve the experience for users.

19 "Question: And why does Groupon want to improve
20 the experience for users?

21 "Answer: I think we believe that if users have
22 a better experience, they'll -- they'll use our website
23 more. They're more likely to stay on the website.

24 "Question: Does caching content on the user's
25 computer or device reduce latency?

deposition designations - Sandridge

1 "Answer: Generally speaking, it can.

2 "Question: Does pre-fetching content reduce
3 latency?

4 "Answer: Again, it can.

5 "Question: What is NOB?

6 "Answer: Actually, it's bookings. I'm trying
7 to remember what N and O stand for.

8 "Question: Does --

9 "Answer: Net operating? Anyway --

10 "Question: Does it stand for net operational
11 bookings?

12 "Answer: I believe so.

13 "Question: Okay. What effect does reducing
14 latency have on increasing NOB?

15 "Answer: We have had an incredibly hard time
16 actually conclusively demonstrating that there is a
17 connection.

18 We've done experiments where we've artificially
19 slowed down applications and haven't seen an impact on NOB.
20 There have been techniques that we use to try to estimate
21 it, but they're -- they're controversial and have a lot of
22 skeptics associated with it. I don't think there's a lot of
23 confidence around any connection between the two.

24 "Question: As an engineer who works at Groupon,
25 do you think that increasing the latency of Groupon's

deposition designations - Sood

1 website and mobile applications would decrease NOB?

2 "Answer: I -- if it was -- if it was increased
3 enough, certainly. If it was crawling, I think that that
4 would have impact on NOB. At what point it starts to have
5 -- so I know that at the extreme it would. The thing that I
6 really don't know is at what point you would actually start
7 to see an effect.

8 "Question: Do you think that IBM is an
9 innovative company?

10 "Answer: Probably.

11 (End of videotape.)

12 THE COURT: How long is the next one?

13 MR. OUSSAYEF: The next one is 4 minutes and 38
14 seconds, Your Honor.

15 THE COURT: Can we do 4 minutes and 38 seconds?
16 Okay. We'll do that.

17 MR. OUSSAYEF: With that, IBM will call Varun
18 Sood. Varun Sood is senior engineering manager at Groupon.

19 THE COURT: Okay. Go ahead and play it.

20 (Videotape deposition of Varun Sood.)

21 "Question: Can you please state your full name
22 and address for the record.

23 "Answer: My full name is Varun Sood.

24 "Question: And where do you work, Mr. Sood?

25 "Answer: Groupon.

deposition designations - Sood

1 "Question: And what is your title at Groupon?

2 "Answer: I'm a senior engineering manager.

3 "Question: Mr. Sood, what are your
4 responsibilities as a senior engineering manager at Groupon?

5 Answer: I'm responsible for providing technical
6 leadership to engineering teams at Groupon.

7 "Question: So your responsibilities don't
8 extend to creating or developing the screens for the mobile
9 apps?

10 "Answer: That is correct.

11 "Question: And how does Groupon maintain that
12 information about the user?

13 "Answer: The user information is maintained
14 through cookies.

15 "Question: And what user information are you
16 referring to when you say that?

17 "Answer: Every user in Groupon is given a
18 unique ID which is stored in a cookie.

19 "Question: Now, you mentioned that the user
20 will proceed from a landing page to a deal page to a
21 checkout page to a completed transaction, is that fair?

22 "Answer: In some scenarios.

23 "Question: On the deal page, does Groupon track
24 any information about the deal that the user is purchasing
25 in that sequence?

deposition designations - Sood

1 "Answer: Yes, it does.

2 "Question: All right. Other than the deal
3 name, any other information about the deal that Groupon
4 tracks on the deal page?

5 "Answer: No.

6 "Question: So on the deal page the user might
7 select certain options and then click the buy button and if
8 they're logged on, then they'll be sent to the checkout
9 page; is that correct?

10 "Answer: That is correct.

11 "Question: And on the checkout page, does
12 Groupon track any information about the deal that the user
13 is purchasing?

14 "Answer: It does.

15 "Question: And what information is that?

16 "Answer: The deal name and the deal price.

17 "Question: Any others other than the deal name
18 and deal price?

19 "Answer: The quantity you are trying buy.

20 "Question: How does Groupon track the deal name
21 on the checkout page?

22 "Answer: It's associated with a pledge ID which
23 is in the URL.

24 "Question: And how does Groupon track the deal
25 price?

deposition designations - Sood

1 "Answer: The pledge ID is tied to a deal object
2 which has a price in it.

3 "Question: Well, you said the pledge ID is tied
4 to a deal object. Where is that deal object?

5 "Answer: It's in the back-end systems.

6 "Question: And where in the back-end system are
7 deal objects kept?

8 "Answer: I'm not aware of the exact system.

9 "Question: So the URL that's sent to Groupon's
10 server includes a pledge ID parameter that identifies the
11 deal, is that a fair characterization?

12 "Answer: I don't know if it is a parameter or
13 part of the URL.

14 "Question: What's the distinction you're
15 drawing there?

16 "Answer: Parameters are separated by a question
17 mark, whereas, a part of the URL is a complete stream before
18 the question mark.

19 "Question: Okay. So the pledge ID is included
20 in the request that's sent to Groupon's servers, at least?

21 "Answer: Yes.

22 "Question: So when you're buying a goods deal,
23 it would still be a sequence of pages ultimately ending in a
24 transaction, that sequence would just include the cart page
25 which isn't on other types of deals, is that fair?

deposition designations - Sood

1 "Answer: It will not also be a sequence of
2 pages, you can directly purchase a deal.

3 "Question: What do you mean by directly
4 purchasing a deal?

5 "Answer: If you have added a deal in the past
6 and you have abandoned the cart, then you do not go through
7 the sequence of events, you directly land on the checkout
8 flow.

9 "Question: Do you have any knowledge about the
10 source code that runs Groupon's iOS applications?

11 "Answer: No, I do not.

12 "Question: Do you have any knowledge about the
13 source code that runs Groupon's Android applications?

14 "Answer: No, I do not.

15 "Question: Do you have any knowledge about how
16 Groupon's back-end services generate the URLs for Groupon's
17 mobile apps?

18 "Answer: No, I do not.

19 "Question: Have you ever had contact with IBM
20 before?

21 "Answer: No, I have not.

22 "Question: Are you familiar with IBM as a
23 company?

24 "Answer: To some extent, yes.

25 "Question: Do you think they do innovative

deposition designations - Sood

1 work?

2 "Answer: It's my personal opinion that they
3 have some really good solutions out there.

4 (End of videotape.)

5 THE COURT: Okay. That completes that
6 deposition; correct?

7 MR. OUSSAYEF: Yes, Your Honor.

8 THE COURT: We'll save any others for tomorrow.

9 Ladies and gentlemen, tomorrow we expect to be a
10 full day from 9:00 to 4:30, so please be here in time for us
11 to get started at 9:00 and order lunch for you. While
12 you're away from us, no talking about the case, no research
13 or reading about the case. Please have a good evening.

14 (Jury exited the courtroom at 12:57 p.m.)

15 THE COURT: Anything to discuss before we break?

16 MR. OUSSAYEF: Not from IBM, Your Honor.

17 MR. HADDEN: No, Your Honor.

18 THE COURT: Have a good afternoon and evening.

19 See you tomorrow morning at 8:30.

20 (Court adjourned at 12:58 p.m.)

21

22 I hereby certify the foregoing is a true and accurate
23 transcript from my stenographic notes in the proceeding.

24

25

/s/ Brian P. Gaffigan
Official Court Reporter
U.S. District Court